THE BRITISH PTERIDOLOGICAL SOCIETY

BULLETIN

VOLUME 9 NUMBER 2
2021

Edited by A.M. Paul

THE BRITISH PTERIDOLOGICAL SOCIETY

Registered Charity No. 1092399

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The BRITISH PTERIDOLOGICAL SOCIETY was founded in 1891 and is still a focus for fern enthusiasts, its wide membership including gardeners, nurserymen and botanists, both amateur and professional. It provides a wide range of information about ferns through its publications and website, and also organises indoor and field meetings, garden visits, a plant exchange, a spore exchange and fern book sales. The Society's journals, *The Fern Gazette*, *Pteridologist* and *Bulletin*, are published annually. *The Fern Gazette* publishes matter chiefly of specialist interest on international pteridology, the *Pteridologist*, topics of more general appeal, and the *Bulletin*, Society business and meetings reports. **Website: www.eBPS.org.uk**

Membership is open to all interested in ferns and lycophytes. **SUBSCRIPTION RATES** (due on 1st January each year) are Full Personal Members £25, Personal Members not receiving *The Fern Gazette* £21, Student Members £12.50, Subscribing Institutions £42. Family membership in any category is an additional £2.50. **Overseas postage** for all journals is an extra £10 (Europe) or £12 (Rest of the World), or for those not receiving *The Fern Gazette* £6 and £8 respectively. We welcome online applications, or contact the Membership Secretary (address above). **Standing Order** forms are available on the BPS website or from the Membership Secretary.

(**Front cover**: *Gymnocarpium dryopteris* (as *Polypodium dryopteris*). Illustration from: Anne Pratt (1855) *The ferns of Great Britain, and their allies the club-mosses, pepperworts, and horsetails*.)

Back numbers of *The Fern Gazette*, *Pteridologist* and *Bulletin* are available for purchase from P.J. Acock, 13 Star Lane, St Mary Cray, Kent BR5 3LJ; E-mail: BackNumbers@eBPS.org.uk

THE

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OF THE

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Vol. 9 2021 No. 2

REFLECTIONS ON 30 YEARS OF BPS EXCURSIONS OVERSEAS

Pat Acock

As Martin Rickard mentioned last year in his excellent overview of Society meetings, the first BPS trip outside Britain and Ireland was to **Austria** in **1965**. For 25 years there were no more, other than a visit to **Guernsey** in **1971**, but over the last 30 years they have become a regular feature of our meetings programme, and I thought a review of them would be of interest.

Paul Ripley and I were on the BPS Meetings Subcommittee. One day Paul had the wonderful idea of a field meeting to **Brittany**, a part of **France** to which he regularly took his family. To me this sounded most exotic. Paul arranged for us to meet up with Rémy and Annie Prelli the year before the BPS trip was to be held, and they helped us considerably. The trip, in **1990**, was a resounding success, with 22 participants from western Europe, including Clive Jermy and Ronnie Viane.

Ronnie had planned a fern excursion to **Northern Spain** for the XIV International Botanical Congress. I had read about this and had the excursion booklet, and I asked Ronnie if he could organise a repeat trip for the BPS in **1992**. Once again we had a very fruitful meeting, learning about the ferns that had come in from the west – Central America and the Atlantic Islands – evolving, merging and competing with the local fern flora.

This was followed in **1993** by a trip to the **Massif Central, France**, organised on behalf of the BPS by Michel Boudrie and Anthony Pigott, and led by Rémy Prelli and André Labatut. This meeting took on a more European group character, and some of the participants continued to a workshop in the Cévennes organised under the auspices of the International Association of Pteridologists (IAP). It was decided to meet annually at different locations in Europe, and thus was born the Group of European Pteridologists (GEP), which ran for about 20 years under the leadership of Ronnie Viane.

In **1994** Clive Jermy led an excursion to **Co. Mayo** in **western Ireland**. *Trichomanes* (now *Vandenboschia*) gametophytes were tracked down and explained by Clive, and Anthony Pigott helped with our understanding of the *Dryopteris affinis* complex.

We had a really exotic trip in **1995** to **Madeira**, led by Graham Ackers. He was assisted by Andrew Leonard, who had a great knowledge of the island and helped the attendees understand Madeira and how the ferns were related to those we had come across on our trip to northern Spain. This was to act as a springboard for many visits to the Macaronesian Islands by the BPS, as well as by small splinter groups of members wanting to explore and learn more about these beautiful islands.

We managed to stay at home in 1996, although some of us availed ourselves of the GEP meeting in the French Alps. In 1997 the GEP visited North Wales, with Nigel Brown taking the lead with Clive Jermy. Similarly, 1998 was barren, but in **1999** we sailed across the

Irish Sea and had a field meeting on the **Isle of Man**. Although only four attended from the BPS, we were joined by a few Manx botanists. During this year we started to think big. Already Jennifer Ide was planning a tour of New Zealand, and at the Warwick Fern Show, Sue and Harry Olsen dropped down from their time-share in the Lake District and gave an illustrated talk on the ferns of Washington State, USA; they invited us to 'come on over'.

In **2000** we were to fly to the other side of the world – to **New Zealand**. For many of us this was the trip of a lifetime. Travelling all that way just to look at ferns. And what a treat it turned out to be, wonderfully planned by Jennifer Ide, with the help of John Lovis, Patrick Brownsey and Barbara Parris. On the West Coast of South Island we were joined by two members of the Nelson Fern Society who led us to some of the most diverse and beautiful spots that South Island has to offer. They accompanied us for the rest of our time on the island, providing us with morning coffee and afternoon tea with cakes from the boot of their car. Such a peaceful and beautiful place filled with ferns. We then spent a week on New Zealand's North Island, admiring the contrast between the two islands.

In **2001** we were to visit **Guernsey,** which is a place to see those ferns that make up the British list but are elusive to those who do not know their habitats and sites. Here we were ably led by Andrew Leonard and Trevor Taylor.

Following our visit to New Zealand, Sylvia Martinelli asked if we would like to go to **Chile** and she planned and arranged it for **2002**.

The ever resourceful and well-travelled Andrew Leonard organised a week in **Tenerife** in the **Canary Islands** for **2002**. The hotelier decorated the steps each day with hibiscus and ferns. We were not only treated to the 'usual' Macaronesian rarities, but also saw many of the xeric ferns that colonise the volcanic sand and rocky outcrops. The beautiful *Asplenium hemionitis* occupied a crack in one such outcrop in the sun, and was tiny and very leathery, quite unlike its normal appearance.

For **2003** we announced two foreign excursions, and I was asked if we were overdoing the foreign trips; I could only answer that we were not expecting all the membership to come to them all but were giving people a choice. The first was to **South-West Ireland**, ably led by Steve and Karen Munyard. We had with us a very keen 15-year-old member who bonded with Ken Trewren who had himself joined the BPS as a teenager (in 1963). For much of the trip we stayed in a house together, with Gill Smith and Karen organising the catering.

The second **2003** excursion included visits to stunning fern gardens and the temperate woodlands of **Washington State, USA**. It was on this excursion, so ably led by Sue Olsen and the Hardy Fern Foundation, that we met up with many like-minded fern fanatics. A nucleus of us became firm friends and have formed the core of many of the participants on these world adventures. In the Seattle area we toured many gardens and realised what a diverse range of ferns people grew, from native and temperate ferns through to British cultivars. We also visited Perry Creek and Mount Rainier, and did a tour of the Quinault Peninsular where we saw hummingbirds.

photo: Pat Acock

Trinidad, 2004

Frank McGavigan, Andrew Leonard, Dan Juggernauth, Paul Ripley

In the beautiful and extensive forests the dominant fern was *Polystichum munitum*, but other ferns found suitable niches. Time spent on the bus allowed us to communicate our love of ferns and to discuss where we could go in the future. Having lunch looking over Lake Quinault and watching the sun set over the Pacific Ocean only added to this most beautiful experience.

The first excursion of **2004** was to **Trinidad** in the West Indies, organised by Graham Ackers and Yasmin Baksh-Comeau. What a way to start the year – visiting a tropical island with most of the ferns completely unknown to most of us, an expert to lead us and with guides to chop a way through the jungle. Memorable moments for me were the detailed programmes, the wonderful jungle guides, and stumbling on *Blotiella lindeniana* at the foot of the last of seven peaks along the highest ridge, one of only two plants ever known from the island. All of this was made possible by Yasmin and Paul Comeau's meticulous planning and knowledge of the ferns.

Early in **2005** Andrew Leonard led us on a trip to **Catalonia**, nestling to the north-east of Spain and the south-west of France. Being higher up in the Pyrenées, some of the seven members who attended were surprised to find the small rivers frozen over and snow lying on the ground, but the days were comfortably warm. The ferns included many species that are either very rare or absent in Britain, such as *Asplenium seelosi* and *A. fontanum*, *Cosentinia vellea*, *Cheilanthes maderensis* and *C. tinaei* (now *Oeosporangium pteridioides* and *O. tinaei* respectively).

At the end of our trip to Seattle, John Scott of Philadelphia, **USA**, had approached me and said he could do a similar trip in the **Eastern States**. Many of us had read the *American Fern Journal* for years and realised what a wealth of ferns North America had compared with Europe. In **2005**, John took us into many woodlands including one in the grounds of his own home. To see a wood seemingly comparable to ours but with a completely different subset of trees and ferns was sheer joy. My own interest was to see the different species of *Osmunda* and *Dryopteris*. Seeing *Lygodium palmatum* scrambling up the low bushes on the woodland fringe was simply magical, having known of this fern for so long only from pictures. We came to realise that there were other people besotted with ferns, just like us. We were able to visit John and Carol Mickel in their fern-filled garden, from which we could just make out the sky-scrapers of New York.

photo: Pat Acock

John Mickel's Garden near New York, 2005
Martin Rickard, John Mickel, Sue Olsen

Having made good friends with members of the Hardy Fern Foundation, I was asked to lead a joint tour of **German fern gardens**. I was put in touch with Berndt Peters, and thus began collaboration with another group of friends on the near continent. I had no idea where to start with organising the tour, but on approaching Berndt the problems evaporated. He planned the ten-day **2006** tour completely and enlisted the help of our Irish/German member Faye Mandt to help with the language (mine, I think). Berndt led us to many spectacular fern gardens, starting with his own near the Danish border. We travelled south-eastwards as far as Christian and Margit Kohout's garden in Saxony, and returned via Rolf and Angelika Thiemann's garden in Altena to the west of Germany. All the gardens were stunning in some way: some contained over 700 different ferns, others were laid out very

aesthetically, and others were very practical for the user, but, whether species or cultivars, the ferns were grown to perfection. Most of us came back feeling that we must do better.

After talking to French and Belgian colleagues on GEP meetings, Paul and I were becoming increasingly aware of what a wonderful place **La Réunion** would be for a BPS visit. We escaped to do a reconnaissance in 2005 and were so fortunate to meet Edmond Grangaud and his wife Marie-Françoise. Edmond showed us around the island, and we made copious notes. We arrived a week in advance of the **2006** excursion to discover that the ten days had all been planned by Edmond, enabling Paul and I to explore the island further and remind ourselves of the fern names. Nearly all the ferns were new to the twenty participants. The large ancient ferns *Marattia fraxinea* and *Angiopteris madagascariensis*, the epiphytic ophioglossums and huperzias, and large ground-dwelling aspleniums were among the favourites.

photo: Pat Acock

La Réunion, 2006

Michael Hayward, Paul Ripley & Edmond Grangaud weathering a beautiful fern-filled trail

By **2007** trips to the continent were becoming short breaks using the cheap air flights. Our friend Sébastien Sant, born and bred in Nice and very knowledgeable on the **Alpes Maritimes in France**, took the disappointingly few participants (six) on a wonderful tour of interesting and often hidden places around Nice. Besides a number of ferns unknown in Britain as they need the warmer climate of southern Europe, we were beginning to note aliens that had crept in from cultivation and moved eastwards to become pan-subtropical weeds, such as *Pteris cretica*, *Christella dentata*, *Cyrtomium falcatum* and *C. fortunei*. Many of these are now becoming regular additions to our own fern flora.

photo: Pat Acock

Texas, 2007
Propagation laboratory at Casa Flora

Jack Schieber, Naud Burnett (the owner), Jennifer Ide & John Acock

At the end-of-tour dinner in Germany, Naud Burnett told me he could arrange a similar trip to **Texas** the next year. I told him we usually have an 18-month lead-in to these tours. In his Texan drawl he said "I might not have 18 months." I replied "Then it's next year then." The British contingent arrived in Dallas in October **2007** on probably the hottest day that any of us had experienced and were ferried from the airport by Naud to his home to meet some of our hosts and others on the tour. The itinerary took in his labs at Casa Flora Nursery, botanic gardens, and the deserts in the west. We certainly discovered how large and diverse the fern ecosystems are in Texas. Absolutely stunning ferns survive unbelievable conditions. Favourites were the cheilanthes, pellaeas and *Bommeria hispida*, but it was also great to see species from our limited British genera in gardens, valleys and woodlands.

When asked if he would like to organise a field trip to Mexico, where he was a professor of ecology, Klaus Mehltreter, a regular on our trips, said he would prefer to use **Costa Rica** since he knew the country well as a result of his MA studies and his mother living there. All was planned, and in **2008**, Paul Ripley, Harald Schneider and I were picked up by Klaus from the airport. Harald, then a fern researcher at the Natural History Museum, had asked if he could join us the week before the meeting for a holiday. Klaus had it all meticulously planned for the 15 participants, twin-centred in San José and Golfito on the Pacific Coast. With 1,200 to 1,300 ferns in Costa Rica, how could anyone pick out a special fern? But the Páramo vegetation on the summit of Cerro de la Muerte at around 3,500 metres left us literally breathless with its sheer difference in vegetation, and in particular the charming *Jamesonia alstonii* and *J. scammaniae*, which we only knew from pictures. We were able to relax together after our daily exertions, discussing the ferns and our adventures in this tropical paradise.

photo: Pat Acock

Costa Rica, 2008

Klaus Mehltreter briefing the group on Volcano Barva

In **2008** I took my family with me to finalise plans for a 'Gentle tour of **Madeira**' the week before the other members arrived, just to make sure the itinerary was as gentle as advertised. Madeira, a favourite with many fern people, has beautiful ferns – some familiar to us, but supplemented by native beauties, and a few exotics that were now causing a nuisance to the native flora.

photo: Pat Acock

Madeira, 2008

Asplenium aethiopicum

Jennifer Ide had volunteered to organise the **2009** meeting in **Australia**, having spent time there in her early twenties. It proved very difficult to organise a trip up the eastern side of the country to her exacting standards, but her persistence paid off and she found an independent tour operator, who even accompanied us on the middle part of the excursion. Barry White, who had been with us in New Zealand, helped Jennifer with the logistics and joined us from his home near Melbourne. Ringing his wife on arriving at Sydney airport, he found out that he had missed seeing snow for the first time by a few hours. Many of us met old friends or developed new ones

photo: Pat Acock

Australia, 2009

Grace Acock, Annie and Rémy Prelli & Klaus Mehltreter relax for a while in Melbourne Botanic Gardens

with whom we have since kept in touch. This international group were exposed to diverse ferns from temperate New South Wales to the tropical rain forests of Queensland.

In the autumn of **2009**, Sue Olsen arranged a trip with the help of Dan Yansura to the mainly Mediterranean part of **California**. On this 2,500 mile tour we explored the coastal fringes before circling back down the more arid central valley. The smaller polystichums of the mountain shoulders we passed through were in complete contrast with the xeric ferns shown to us by David Schwartz in the Bakersfield area.

Early in **2010**, Sebastien Sant once again led a tour near his home in **France**, mainly in the **Department of Var**. The region was experiencing its coldest weather in a generation. We were joined by other friends: Pascal Holveck, and Rémy and Annie Prelli, and were accompanied daily by various other people, some of whom we knew. The ferns were quite robust even during this cold spell, and we saw many of the aspleniums that have not yet ventured to British shores.

July **2010** saw a group of 30 people from the USA, Ireland, Germany and Britain in **South-West Ireland**, ably lead by Jim and Val Dennison. We were delighted by this verdant corner of Europe, which exhibits rare European ferns such as *Asplenium* ×*ticinense* and *Vandenboschia* (*Trichomanes*) *speciosa* along with exotics including *Dicksonia fibrosa*, *D. antarctica*, *Sphaeropteris medullaris*, *Microsorum diversifolium* (now *Lecanopteris pustulata*!), *Cranfillia* (*Blechnum*) *fluviatilis* and *Lomariocycas* (*Blechnum*) *tabularis*.

Andrew Leonard led another trip to the ever-popular island of **Madeira** in early **2011**, which surprisingly attracted only eleven members.

A second trip to the **Isle of Man** in **2011** was organised by Jennifer Ide with a view to helping the Isle of Man botanists and ecologists with identification of critical species, as well as recording as many ferns as possible in sites of special interest on the island.

Another of our joint trips with the HFF was organised by Naud Burnett and Kent Kratz, and took place in June **2011** in six of the **South-Eastern States of the USA**. Naud's wife Wim came from Tennessee, and they had arranged the venues the year before. The ferns were truly remarkable, and the environment varied from very hot and humid in the south, to hot and humid in the north. Naud had taken special care to seek out the Appalachian spleenworts and their hybrids, knowing of my interest in the group. Martin Rickard was especially interested in a crested marsh fern – *Thelypteris palustris* 'Pufferae'; as far as he knew it was the only variety of this species known in the world, and it had not been found in Britain.

photo: Pat Acock

South-Eastern USA, 2011

Participants studying a collection of the xeric fern flora

In **2012** Jennifer Ide arranged a splendid trip to **South Africa**, organised by Jolanda and Allan Nel. Twenty-two participants came from the USA, Mexico, Kenya and UK. Jolanda had spent many hours preparing helpful 'goodie bags' for us, bearing the BPS logo and containing maps and pennants for the cars. Wild sites as well as nurseries and private gardens were visited. We thought Africa would be very hot but we were mostly above 2,000 metres and the climate was more pleasant. After a few superb gardens with an abundance of very different ferns, we were out into the African countryside with such a variety of ecological niches and correspondingly unique ferns such as *Schizaea pectinata*, *Actiniopteris radiata*, *Alsophila dregei* and *Anemia* (*Mohria*) *marginalis*. The statuesque *Asplenium aethiopicum* subsp. *aethiopicum*, the diploid in this complex, formed almost a low hedge along our path in one place. We saw over 140 species of ferns. Such stunning scenery and ferns greeted us each day. This trip was so special because of the great planning of Jolanda and Allan, the different landscapes, and the unique set of ferns we encountered.

photo: Pat Acock

Tour of Germany & Austria, 2012

Roger Golding, Rolf Thiemann, Martin Rickard, Barry Colville

Rolf Thiemann, who had been disappointed that Paul and I had not been able to accompany him on his GEP trip to Austria a few years before, offered to lead a BPS trip to **Germany and Austria** in July **2012**. What a splendid affair it turned out to be. We started in Berchtesgaden in Bavaria, moving on to Kraubath in Austria later in the week. We soon discovered what a depauperate flora we experience in Britain compared with Europe. Ferns that are rare and confined to few localities in Britain, and related species not found in Britain at all, were in splendid abundance. Rolf was such a congenial, humorous host as well as knowing European ferns and their ecology so well. The trail leading down from the Eagle's Nest (Hitler's lair above Berchtesgaden) was simply fabulous, with multitudes of ferns such as *Polystichum lonchitis*, *Cystopteris alpina* and *C. montana*, which are so rare in Britain. Other gems seen during the tour included *C. sudetica*, *Dryopteris villarii*, *Asplenium seelosii*, *A. fissum*, *A. adulterinum*, *A.* ×*clermontiae* and *A.* ×*poscharskyanum.*

In **2013** Wim de Winter invited the South-East and East Anglia Groups on a trip to **The Netherlands**. Here we met friends old and new at Leiden's botanical garden, a rich centre for fern studies over many years. Harry Roskam has kept a very close eye on both the indoor ferns and in particular the outside gardens, which have one of the finest collections of ferns in Europe. For the next three days we were taken to the woodlands that have evolved on land reclaimed from the sea, and Piet Bremmer interpreted the ferns for us.

photo: Pat Acock

The Netherlands, 2013

Bart Hendrikx Harry Roskam & Paul Ripley enjoying the ferns in Leiden's Hortus botanicus

The exotic adventures continued in **2014** when Yvonne Golding and Roland Ennos led a trip to **La Palma in the Canary Islands**. Here ferns that only occur in the warmer parts of Europe, including *Diplazium caudatum*, *Ophioglossum lusitanicum*, *Pteris incompleta* and *Woodwardia radicans*, share the island with the xeric ferns of the volcanic rocks and clinker, such as *Asplenium aureum*, *A. filare*, *Cosentinia vellea*, and *Cheilanthes maderensis* (now *Oeosporangium pteridioides*).

photo: Pat Acock

Italy, 2014

Phegopteris connectilis in Adamello Park, near Preda

After years of Enzo Bono's disappointment in the GEP rejecting his offer of a trip to his beautiful village in **Italy**, Paul Ripley liaised with him to take the BPS in **2014**. The village nestles in the foothills of the Alps and is on an old Roman road to Switzerland above the Italian Lakes. Enzo and Lilliana, his wife, led us on a cultural and botanical *tour de force*, with World Heritage rock carvings from 6,000 years ago and exceptional ferns all contributing to an amazing trip. One outstanding area on a steep slope had *Asplenium septentrionale* and large clumps of *A.* ×*alternifolium* all over the exposed scree. Ferns that are occasional, rare or absent in Britain were generously distributed throughout many of the sites we went to, and included *Adiantum capillus-veneris*, *Phegopteris connectilis*, *Gymnocarpium dryopteris*, *G. robertianum*, *Equisetum ramosissimum*, *Polystichum braunii* and its hybrid with *P. aculeatum*, *P.* ×*luerssenii*, a candidate for the most handsome member of the Dryopteridaceae in Europe.

Twelve years after our coming together for joint fern tours around the world with the Hardy Fern Foundation, we were fortunate that Pat Riehl manage to co-opt her friends Kasuo and Marilyn Tsuchiya to arrange a meeting in **Japan** in **2014**. Many of the participants had longed for a chance to see the ferns of this country. Somehow Kasuo arranged for us to meet up at the start of the tour with some of the leading Japanese fern professionals and had persuaded Mr Taketoshi Oka and Mr Ichiro Yamazumi to take us to some of the most interesting and beautiful places to see ferns. Two follow-up 'unofficial' tours in 2016 and 2019 saw us in yet more fern-rich places.

photo: Pat Acock

Japan, 2014

Ms Misao Mizohata and Ms Yoko Iguchi stop for lunch after a forest walk near Kyoto

Andrew Leonard arranged with Tim Pyner a further excursion to **Guernsey** for **2015**. Within no time of arriving, Andrew had found yet another plant of *Asplenium* ×*microdon*. Once again many new finds of Guernsey's rare ferns, including *A.* ×*sarniense*, were discovered, and confirmed by Fred Rumsey who they met by coincidence holidaying with his wife Sue.

Plans were laid for a trip in **2015** to the little-known **Vercors plateau in south-east France** overlooking Grenoble. I had been given the name of Jean-Luc Destombes by Nick Hards. Fortunately for us, Jean-Luc had recently retired from looking for organic molecules in the outer reaches of space and, with a little encouragement from his wife Annie, he took on the challenge of leading a party of eighteen from Britain, France and the Netherlands. We were treated by Jean-Luc to a meticulously organised tour, from the hotel and packed lunches to guest experts, and he shared his wonderful knowledge of the ferns and terrain. Ferns of course were plentiful in this undisturbed and more southerly part of France, and included *Asplenium lepidum*, *Botrychium lunaria*, *Cystopteris alpina*, *Equisetum ramosissimum*, *Dryopteris villarii*, *Polystichum lonchitis*, *P.* ×*illyricum* and a few other Dryopteridaceae hybrids. Against his better judgement, Jean-Luc allowed five of us to journey south to the Gorges du Verdun to see the extremely rare *Asplenium jahandiezii*. Arriving after lunch to a temperature of 44°C, we then raced back to arrive embarrassingly late for the evening meal; the rest of the party had had a very calm and pleasant day.

photo: Pat Acock

Vercors Plateau, France, 2015

Fons and Hennie Slot relax over lunch

By popular demand, Andrew Leonard and Tim Pyner executed another memorable visit to **São Miguel in the Azores** in **2017**. Many of the fern rarities were refound. The Azores have many beautiful gardens that grow a number of exotic ferns and tree ferns. As we observed, these are in danger of spreading into the natural landscape.

photo: Pat Acock

Harry Roskam at Leiden's Hortus botanicus, 2018
holding a frond of ×*Cystocarpium roskamianum*, the *Cystopteris*/*Gymnocarpium* hybrid he discovered

In **2018** we met up again with our friends in the **Low Countries**. The aim of this tour was to visit our Dutch and Belgian friends' gardens and discuss growing conditions, etc., and also to visit nurseries that grew a lot of ferns. Wim de Winter arranged transport and drove us about. Remko Beuving arranged the hotels. Our dear friends Fons and Hennie Slot entertained us in their beautiful newly established garden. Although seriously ill, Fons looked after us and took us to one of their favourite restaurants on a most lovely summer's evening. He reintroduced Martin Rickard to Cors van de Moesdijk – they had not met or corresponded for 35 years. Fons sadly died in early 2019.

On a garden meeting arranged in **2019** by Sabine Nittritz and Julian Reed we visited friends old and new in **northern Germany**. We were fortunate to have Berndt Peters with us, who had arranged our first tour of fern gardens in Germany. We visited some of those again but also many other stunning gardens – all so beautiful and with splendidly grown ferns.

photo: Pat Acock

Germany, 2019
Pyrrosia matsudai growing to perfection in Berndt Peter's garden in Süderbrarup

In between times, Paul and I have continued to be in research mode. With trips back to La Réunion, three to Mexico, one to Ecuador, three to Japan and many trips between us to New Zealand, we have gathered much information and expertise. With Martin Rickard we travelled to New Caledonia, Lord Howe Island and Cape York in Queensland, and to the west coast of North America (California, Oregon and Canada), and have looked at the logistics for future trips.

However, on a down-beat note there are now many restrictions for travelling in parties to America and other parts of the world. We have travelled in ad hoc groups but now more and more it looks as though there may be issues with insurance, and it is possible that local tour guides may be required. We are coming round to thinking that a new, younger team may be needed to plough through this minefield. Of course, we will tag along.

NATIONAL GARDEN MEETING

KENT & EAST SUSSEX GARDENS (Cultivar Group) – 25-26 September

(Leaders: Julian Reed & Mark Border)

Saturday – Mark Border's garden, Bexhill-on-Sea, East Sussex and Riverhill Himalayan Gardens, Sevenoaks, Kent **Pat Acock**

We met at Mark Border's wonderful garden at 10:30. This was the first official national BPS meeting since the start of the pandemic, and it was so enjoyable to catch up with ferny friends in person. Some local members joined us just for the morning session, and people from as far away as South Wales and Staffordshire came for the whole weekend.

To say that Mark grows ferns is a definite understatement. He propagates them in their hundreds. There were *Polystichum setiferum* cultivars down one side of the house, and along a narrow border on the other side were ferns from all over the world. In the sun-drenched front garden there were *Cheilanthes* species and *Astrolepis sinuata*. In the back garden a small lawn opened up increasingly to a small, wooded area at the rear. Here there were *Dicksonia* in the ground and in large pots, and woodland ferns such as *Dryopteris* and *Polystichum* from many countries, along with species of *Polypodium*, *Onychium* and *Cystopteris*.

photo: Pat Acock

Sue Dockerill, Paul Ripley and Brian Dockerill in Mark Border's Garden

In the greenhouse were benches and shelves crammed with hundreds of sporelings in recycled food tubs, with the more tender ferns in the collection such as *Cyathea*, *Lygodium*, *Pteris*, *Onychium* and *Cyrtomium* species growing in the ground. And such generosity – there was a collection of well grown plants that we could just help ourselves to. And if you liked a sporeling, Mark would spoon one out for you or you might find yourself with a whole tub. There were other plants tucked away between the ferns, such as bulbs and flowers for all seasons, but I am ignorant of these things.

At Riverhill Himalayan Gardens the owner allowed the nine of us free entry to the garden, since South-East Group leaders Julian Reed and Peter Clare had helped source ferns for the gardens as well as spending a lot of time clearing the area around an old Edwardian rock garden with head gardener, Adam Roberts, and advising on where to put the ferns.

After a light lunch at the café, we were greeted by our host, Charlie Broom. She led us into a formal walled garden, where against the wall there was a host of well grown *Asplenium scolopendrium*. A larger formal garden was bounded by a delightful rose garden and above it was a much larger boundary wall that seemed to be one side of an ancient greenhouse. Facing the full sun was *Adiantum capillus-veneris*, spreading over large areas along the brickwork in the mortar at various heights, though in that situation it was slightly yellow and somewhat leathery in texture. Out of this area, along a smaller capped wall in partial shade, were a number of large plants of *Asplenium adiantum-nigrum* growing in the mortar.

photo: Pat Acock

***Adiantum capillus-veneris* on a wall at Riverhill Himalayan Gardens, Kent**

This path led into deeper woodland where swathes of *Dryopteris* and *Polystichum*, including cultivars, spread down a cleared area into the old rock garden beside a small pool. Here were the choicest ferns but despite the notices some of the ferns suffered from children using the rockery for climbing. On the rockery were gems from genera such as *Cyrtomium*, *Blechnum*, *Arachniodes*, *Athyrium*, *Polypodium* and *Cystopteris*, as well as some very mature plants from the late Ken Trewren's *Dryopteris* collection.

Sunday – Julian Reed's garden, Kemsing, Kent and the National Collections of *Polypodium* and *Polystichum* on his allotment in Seal, Kent **Paul Ripley**

I counted 17 members at Julian's allotment, but there must have been nearer 20 at his garden, where we met at 10 a.m. It was good to see so many members, including some new attendees. As on the Saturday, Mark Border, Julian, Peter Tindley and other members had kindly and generously brought some of their surplus plants for others to take home.

Julian's garden has always been a delight. He brings his expertise as a plantsman and his passion for fern cultivars together with growing and propagating skills to create a garden of beauty as well as horticultural interest. The garden is not large, and has to accommodate two greenhouses and a shed (with a *Polypodium* roof of course!). Julian uses other plant groups, especially bulbs (iris and cyclamen were flowering at the time of our visit) to enhance his spectacular display of ferns. It is impossible to do justice to the collection here, but there were some beautiful *Polystichum* and *Polypodium* cultivars, along with 'aliens' such as *Pleopeltis* (*Polypodium*) *guttata* and *Pyrrosia sheareri.*

With some difficulty we dragged ourselves away to nearby Seal, where Julian has two allotments. He has erected two polytunnels, used as shade-houses for his National Collection of *Polypodium*, but had recently erected a third to house his second National Collection – of *Polystichum.* Interestingly, he has planted climbers over the frame to provide shade, and will add vines to them shortly. The ferns are beautifully displayed – well spaced and with copious amounts of composted bark. Again, it is impossible to mention more than one or two plants, but I was impressed by a crested *Polystichum* ×*bicknellii* and *P. setiferum* (Divisilobum Laxum Group) 'Ralph Fawcett', both of which must be real rarities. I was also intrigued by a dwarf (or 'mini') form of *P. setiferum* 'Zillertal', and we all came away with plants of *P. setiferum* Divisilobum Group from Elmslack, originally from the Lake District. It is clear that not only are these National Collections secure in the best possible hands, but that Julian and his colleagues' nose for varieties will see this collection continuing to expand.

Julian and his wife Margaret had prepared a delicious lunch (and cream tea!) for us, which we ate at the village hall in Kemsing. Not until four o'clock did we leave, after thanking Julian and Mark for a lot of very hard work in planning and arranging a fabulous weekend, and entertaining us royally into the bargain.

LECTURE MEETINGS ONLINE

SPRING MEETING – 24 April

Bryan Smith

As the AGM was held by Zoom, it was decided to include a couple of Zoom presentations to try and mimic the usual Spring face-to-face meeting.

Peter Blake gave an extremely knowledgeable and entertaining talk on growing tropical ferns – a talk originally planned for the 2020 Spring Meeting. He began with 'Why do it in the first place' and possible reasons included trying to reproduce nature, and growing 'strange' ferns. Large man-made hot houses, like the excellent one in Utrecht University Botanical Garden and the tropical part of the Belfast Ravine, were clearly beyond the amateur enthusiast. But Peter had set about creating his own smaller tropical conservatory on the side of his house. The sight of diggers having to excavate footings to 15 feet depth is still one to amaze! His criteria for the optimum environment were temperature (20-28°C), light (14 hours at 400-800 Lux) and humidity (80-90% RH). Achieving these had involved many pitfalls before success. Heating was by blow or convector heaters, cooling by hand-opened windows, additional light from LED lights (including under benches), and shading (30% transmission) by exterior awning (rather than internal cane blinds). Humidity was provided by a fogger with tap water, but lessons learnt were that too much misting was not good for electric circuits and also created green algae on surfaces. Watering was best done with rain water, and his use of carpet underlay in trays with bottles of water with small holes in them (a sort of inverse drip-feed) was inspirational.

Pests were generally what anyone growing house plants experiences – slugs and snails, aphids, scale insects and mealy bugs. Each had their own treatment – including slug pellets, Provado Ultimate Bug Killer, ant powder, SB Plant Invigorator, methylated spirits and Bug Clear Vine Weevil Killer. As Peter demonstrated though – with pictures of large, healthy tropical ferns (*Asplenium nidus*, *Drynaria* (*Aglaomorpha*) *splendens*, *Microsorum membranifolium*, *Drynaria sparsisora* and *Selaginella willdenowii*) – the reward was well worth the effort.

photo: Peter Blake

Drynaria sparsisora **in Peter Blake's conservatory, Norwich**

The second talk was by Julian Reed on fern cultivars, a subject Julian is an expert on. He gave us examples of a whole host of unusual cultivars that he had come across and grown. He began with a crested form of *Christella dentata*, lost since Victorian times, which amazingly was found recently in the late Mick Craddock's collection as *Nephrodium molle* 'Corymbosum'. This was followed by a crested form of *Polypodium cambricum* found by Patricia Howard in Cornwall – probably the first find in the UK in over 100 years. Other unusual cultivars that Julian mentioned included nice forms of *Asplenium trichomanes* 'Incisum' from Neil Timm and *Polystichum setiferum* 'Grandiceps Gracile' from Fibrex, *Onoclea sensibilis* 'Hortus Skeleton' from a German supplier, *Matteuccia struthiopteris* 'Bedraggled Feathers' from Peter Blake, *Athyrium iseanum* 'Cristatum' × *A. niponicum* 'Purple Garden' from Wouter van Driel, *Athyrium* × 'Angelika Teipel' from Rolf Thiemann, *Cystopteris fragilis* 'Grandiceps' from Ingo Carston, *Polystichum setiferum* 'Alpha' from Mark Border and *Athyrium filix-femina* 'Fibrex', which Angela Tandy had lost but was replaced by several BPS members (the benefit of sharing plants around!). Finally, Julian paid tribute to Angela and her colleagues at Fibrex and their contribution to fern growing; sadly Fibrex will be closing the fern part of the business when Angela retires.

AUTUMN MEETING – VICTORIAN FERNERIES – 27 November Bryan Smith

As a result of the Covid pandemic, this year's Autumn Meeting was held online as a collection of Zoom talks on the theme of Victorian ferneries (the topic originally planned for 2020's face-to-face meeting). So I was very pleased to get four volunteer speakers who gave us excellent talks describing a selection of ferneries from around the UK.

The first talk was by Alison Evans on the Southport Fernery in Lancashire. The fernery was formally opened in Southport Botanic Gardens in 1876 and was typical of Victorian ferneries – glass-roofed and with artificial rock walls with planting pockets. Several images from the era exist and an article by Michael Hayward in the 2010 *Pteridologist* (Vol. 5, Part 3, pp. 186-189) described the fernery and its history in detail. Alison showed photos of the planting in 2009, which included *Angiopteris evecta* and *Lophosoria quadripinnata*. However, by 2017 the *Angiopteris* was almost smothered by *Asparagus densiflorus* and the *Lophosoria* was almost a corpse! A partnership was formed between the BPS and the local Botanic Gardens Community Association, and in 2018, volunteers, garden staff and Royal Botanic Garden Edinburgh (RBGE) staff set about improving the fernery and planting. This included removing difficult-to-dig-out umbrella grass and using tweezers to remove *Oxalis*. A van load of rare ferns donated by RBGE included 'Big Bertha' (*Cibotium schiedei*), almost too big to go through the door, which helped to make the fernery spectacular once more. In 2018, the Fernery and Churchtown Park were awarded a Gold Medal in Britain in Bloom and the Fernery appeared on BBC2. Since then, volunteers have continued to improve the planting (with donations by BPS members, RBGE and Glasgow Botanic Gardens), the water system and the hypertufa rock. Flowering plants such as *Epiphyllum* and *Paphiopedilum* added colour, and a pied wagtail successfully nested in one of the wall pockets!

Danesbury Fernery in Hertfordshire was the subject of the second presentation, given by Colin Adlam. Situated between Welwyn Garden City and Stevenage, the fernery began life in 1859 as part of the 18th-century Danesbury House, and in its day was a highlight with Pulhamite stone and an extensive, renowned fern collection – "the best in the Home Counties" – set in a grotto. Over the years it was abandoned, although ferns were distributed to other collectors in the area. The deep grotto was gradually filled in but some clearing was done in 1995 and an article about it appeared in the *Pteridologist* in 2000 (Vol. 3, Part 5, pp. 112-114). Infill had reached surface level before local volunteers began excavation and renovation with the help of Welwyn Hatfield Borough Council in

2015/16. Since then, the restoration by local volunteers has been on-going. Ferns included many typical garden ones, and included donations made by BPS members. Unusually, there was *Pneumatopteris sogerensis*. Colin noted that to attract more visitors, planting was not exclusively ferns! One problem was lack of water (the original fernery had its own tanked supply), particularly as the grotto is in an old chalk pit.

Chloe Rice gave the third presentation, telling us about the Tropical Ravine in Belfast Botanic Gardens. Chloe particularly emphasised the historical and cultural setting of the Ravine as it developed over the years in Belfast. Although the Botanic Gardens were established in 1828 it was not open to the general public until 1895. The Tropical Ravine building was constructed during the turn of the 20th century over the site of an orchid and fern house originally built in 1828. It housed mainly Irish and British native ferns, including the Killarney fern, and was lit by some 700 candles! Restoration of the building began in 2013 at a cost of £3.8 million and retained many of the original features including the aerial walkway and water cascade. It was divided into temperate and tropical zones. Rarer original cycads, bananas and tree ferns have been kept and replanting has been faithful to the original collection. Problems with the tropical misting system harming plants were being addressed. The Ravine offered a good blend of education, conservation and history in a pleasant environment, and it was hoped that a BPS visit could be arranged in the future.

The final presentation was by Mary Gibby on the Benmore Fernery situated in the Benmore Botanic Garden (part of RBGE) near Dunoon. The fernery was originally built in around 1875 by the estate owner, James Duncan, a wealthy Victorian. However, it only flourished for about 12 years before the estate was sold. Set in a steep sloping glen, it had its own boiler, a glass roof and one of the side walls was the cliff-face. Restoration of the fernery was completed in 2019 at a cost of £650,000 and Mary showed us a good selection of pictures of the progress of the restoration, including a new glass roof, renovation of the stonework, and infilling with compost. The fernery was accessed by a long winding set of steps (fern-lined of course) and visitors were greeted with an incredible array of some 35 species of ferns, particularly blechnums, pyrrosias, cyatheas, etc., and a grotto with Killarney fern. Most of these species you wouldn't expect to survive in a building with no electricity or heating – though a gas heater was added to keep winter temperatures above 0°C. The ferns were sourced from RBGE, including many propagated by Andy Ensoll and his team. It was impressive to see the photo of an extremely large *Cyathea* trunk being dragged down the slope and through the back door of the fernery! Mary concluded by encouraging us not only to visit Benmore, but also a newly restored fernery in Hospitalfield, Arbroath.

photo: Mary Gibby

Tree ferns in Hospitalfield Fernery, Arbroath, Angus

ZOOM TALK SERIES with the Hardy Fern Foundation

Julian Reed

In early December 2020 I was talking with Alison Evans and Richie Steffen, and we agreed that international Zoom meetings would be welcome, as so few actual meetings had taken place due to Covid. The Hardy Fern Foundation already had the facility to use Zoom for large numbers of people, and with the help of Dennis Beatty, their electronics 'whizz', we set up a programme of talks for the third Saturday in the month at 10 a.m. in Seattle, 6 p.m. UK time. The format is about an hour's talk followed by questions and answers. The meetings have been hosted by Richie, President of the HFF, Alison, President of the BPS, and me, with Dennis sorting out all the technology.

The first talk was in December, when I spoke on *Polypodium* cultivars.

In January 2021, Richie did a great talk on the Elisabeth C. Miller Botanical Garden in Seattle, and ferns in his own garden. It was fascinating, including hearing about issues with the weather. The range of ferns was great, and the planting combinations beautiful.

The next month I did a talk on *Polystichum* cultivars.

Richie's topic in March was *Ferns of the Siskiyou Mountains and northern California.* Once again the photography was brilliant, and the talk was well put together, with fascinating details of where the ferns like to grow.

March was originally going to be the last of the series, but the talks were being viewed in so many countries, including Sweden, Holland, South Africa and Australia, and a lot of us were still isolating, so the talks were continued.

In April, *Athyrium filix-femina* cultivars were the subject of my talk. Steve Coleman gave a lot of assistance with images, taken mainly in his garden.

Paul Ripley nobly agreed to do a talk in May on the ferns seen in German gardens during the BPS visit in autumn 2019. For me, it was fascinating to see his take on what we saw. It was interesting to see plants that we think of as tender, growing outside.

After a break over the summer and early autumn, Darla Harris, owner of the Fern Plantation Nursery near Houston, Texas, very kindly took on the November slot. Her large nursery has over 200 ferns available. The weather over the previous winter had done a lot of damage to wild and garden ferns. The challenges of coping with extremes of heat and cold was very interesting.

In December, Michael Dreisvogt's presentation was titled *Fifty shades of green! – The fern collection in Arboretum Härle*. Michael is a very talented plantsman and a brilliant speaker. It was great to see the Arboretum's ferns – I am sure he has more than fifty shades of green, and the plant combinations were lovely. There were a lot of questions and comments from the audience in the Zoom chat box.

It is planned to continue the talks each winter, from November to March, on the third Saturday of the month. You have to pre-register through the BPS or HFF websites. The talks are available until the next one is uploaded, so you can watch them again or catch up if you miss one.

Thanks are due to the Hardy Fern Foundation, and especially to Richie Steffen and Dennis Beatty, for making these talks possible. Their popularity has spread to many nations. Long may they continue.

If you have any ideas for talks or feel able to be one of the speakers, please contact me at julianreed@waitrose.com, as I organise the programme with the HFF on behalf of the BPS. We need talks on both wild and cultivated ferns, please.

REGIONAL REPORTS

CORNWALL AND DEVON

Ian Bennallick

No meetings were held in 2021 and there were no fern discoveries to report. I will be organising some Botanical Cornwall Group meetings in 2022, so hope to have some ferny items of interest for the next *Bulletin*.

EAST ANGLIA

Paul Spracklin's garden at South Benfleet, Essex – 4 September

Peter Blake

After nearly two years of not meeting, the East Anglia Group had planned a reunion at Peter Blake and Nick Lodge's house on 7th August. Sadly, this fell foul of the 'pingdemic' and had to be cancelled whilst Peter went into self-isolation. Paul Spracklin kindly offered to host a meeting at his house four weeks later, an offer that was readily accepted. The East Anglia and South-East groups have visited Paul's garden on several occasions over many years. He has a remarkably varied garden in terms of both terrain and the selection of plants. Recently, he bought and had demolished a run-down house next door and saved the rubble to create a huge well-drained area for his large collection of cacti and succulents.

Arriving at the house was reminiscent of a car boot sale, with heads peering into the depths looking for fern swaps, of which there were many. In the group were four members of the South-East group, five from East Anglia, and Matthew Reeve from Milton Keynes, where the Midlands Group is currently inactive. Paul explained that he had become increasingly

photo: courtesy Sylvia Martinelli

Members amongst Paul Spracklin's spikey plants

Sylvia Martinelli, Pat Acock, Nick Lodge, Karen & Steve Munyard, Julian Reed, Peter Blake, Rosie Steele, Matthew Reeve

interested in dry 'spikey' plants and huge cacti – one was over twelve feet high. He was worried that we would be disappointed by the lack of ferns. However, the garden proved to have many xeric ferns in cracks between his lava boulders, some of which he protected over winter with a temporary polytunnel. *Myriopteris tomentosa*, *Astrolepis sinuata*, *Pellaea ovata* and other xerics were easily recognised. Less easy was *Cheilanthes quadripinnata*, given to Paul by his close friend Tim Pyner some years ago. Another surprising find was *Lepisorus macrosphaerus*, growing by the entrance to an old air-raid bunker in which Paul hoped to establish a filmy fern collection.

After so long not seeing each other, there was a lot of chat, advice and enthusiasm. Paul's interest in ferns was rekindled and he is actively looking to increase his xeric fern collection. It was a good day.

Danesbury Fernery, Welwyn, Hertfordshire – 25 September — Peter Blake

The Danesbury project has been visited by members of the BPS on three occasions and has been described in both the *Pteridologist* and *Bulletin*. Colin Adlam is a member of both the BPS and the Friends of Danesbury Fernery. Colin lives locally and is the main source of advice and material for the re-ferning of this interesting site.

Since our last visit, the 'rustic bridge', described in Victorian texts of the site, had been recreated, and there had been a lot of replanting with both ferns and other plants. We toured the site, impressed with the size and quality of the ferns in this rather open, chalky location. Colin explained that in 2020 they had needed a lot of hosepipe watering but this year had been able to rely mostly on rainfall.

photo: courtesy Peter Blake

Danesbury Fernery, Hertfordshire

Nick Lodge, Peter Blake, Matthew Reeve, Colin Adlam, John Roper (Chairman of the Friends of Danesbury Fernery)

John Roper, Chairman of the Friends of Danesbury Fernery, told us that they had been trying to find out where ferns had been taken to when the fernery fell into terminal decline in the 1920s. Apparently, some ferns were taken locally to the house of the Sopers, a talented artistic family of which one daughter, Eileen, had gone on to illustrate the Enid Blyton books. They had created a large wildlife garden, the Wildings, which was eventually left to the RSPB. This site is now under threat from housing developers, and he was keen

that the BPS be involved in surveying the ferns in the Wildings, and in supporting the protection of the area.

Whilst only four members of the BPS attended that day, ferns were given to help stock the beds and it was an interesting and worthwhile visit.

Norwich, Norfolk – 23 October — Jonny Lamb

Sixteen members met at Peter Blake and Nick Lodge's house on a bright Saturday morning. Some loitered on the patio to admire the plants, some wandered through the conservatory, and all mingled in the kitchen for a warm welcome and cup of coffee.

As guests arrived, the plant swaps zone grew, with some fine offerings. After refreshment, we headed off to a city park in Norwich – the Plantation Garden, about ten minutes' walk from the house. This concealed Victorian garden is very sheltered and is sumptuously planted with ferns, bulbs, and many Mediterranean specimen shrubs and perennials. These are set against a quirky, Italian Gothic backdrop.

The garden, originally created in an old chalk quarry in the 1860s by a local merchant, Henry Trevor, has been the subject of much more recent restoration, and its current planting has been created since 1980. Among the ferns, we spotted a number of handsome varieties of *Dryopteris*, *Polystichum* and *Asplenium*, as well as *Dicksonia antarctica*, and a striking *Woodwardia unigemmata* (flat form) growing on a steep bank. As we headed back to the street, we could see the footprint of the original Victorian Palm House, and a fine, modern greenhouse, reconstructed in the traditional style.

photo: Peter Blake

A panoramic view of the Plantation Garden

And so back to the house for plant swaps and a tasty lunch buffet. Two fern talks ensued, the first by Matthew Reeve about macrophytic ferns (i.e. aquatic and marginal ferns and lycophytes), a topic new to many of the audience. The second, by Peter Blake, was an account of fern hunting in the Horton Plains, a high altitude nature reserve and beauty spot in south-central Sri Lanka. Audience participation was needed to identify some of the less familiar ferns found there.

All in all it was a fine day!

MANCHESTER AND NORTH MIDLANDS

Mike Canaway

RHS Bridgewater, Manchester – Wednesday 18 August

(Leaders: Mike Canaway (BPS), James Hall (Team Leader for Woodlands at RHS Bridgewater) and Michael McCann, Arborist, RHS Bridgewater.)

The aim of this joint meeting with the North-West Group was to have a field visit to look at ferns in the undeveloped parts of this garden during the morning, visit the new shop and café over lunch, and then look around the garden during the afternoon. For further information about the garden, see www.rhs.org.uk/gardens/bridgewater.

photo: Yvonne Golding

Manchester & North Midlands and North-West Groups' visit to RHS Bridgewater

Michael McCann (Arborist, RHS), Henry Folkard, David Porter, Roger Golding, Chris Evans, James Richardson, Alison Evans, Mike Canaway, Roland Ennos, John Wantling, Sue & Ken Seal, James Hall (RHS Woodlands Team Leader and host)

After a welcome and introduction by Mike Canaway and RHS staff, James led us towards Middle Wood, passing the Weston Walled Garden on our left, which was visited in the afternoon. The first ferns seen were a group of four plants of *Dryopteris dilatata* beneath a young oak near the junction of paths at SD7379 0049. Mike McCann gave an introduction to the trees and nest sites, etc. nearby. We continued to a rather promising ditch containing numerous ferns. This ditch extended from about SD7386 0047 to SD7394 0046, and included *Athyrium filix-femina* (normal and red-stemmed plants), *Dryopteris filix-mas*, several plants of *D. affinis* subsp. *affinis*, one of which was unusual in that it had a less robust stipe, was more convex, and had darker scales than usual. Average stomatal length was 42.2 µm, and flow cytometry carried out by Libor Ekrt in the Czech Republic suggested that it is diploid, i.e. has two sets of chromosomes. Together with the morphological features, this suggests either subsp. *affinis* or morphotype 'convexa'. There was also a plant of *Asplenium scolopendrium* beneath a birch near the ditch and Yvonne Golding reported seeing *Equisetum arvense* in the ditch.

James had to round up the group from this interesting spot and take us off-path into the woodland, where at SD7406 0058 we saw a rather congested form of *Dryopteris affinis* subsp. *affinis* reminiscent of a cultivar, with *D. filix-mas* nearby. A little further on were some large clumps of ferns, one of which was *D. affinis* subsp. *affinis* (diploid on flow cytometry), next to a rather unusual form of *D. borreri*, which according to Roger Golding was approaching *D. lacunosa*. Flow cytometry confirmed this to be triploid, i.e. with three sets of chromosomes, which fits with both these taxa. These were at SD74064 00586. James then took us to the wooden sculpture inspired by the Ents in *The Lord of the Rings* and hence referred to as the 'Ent'. Here, at SD73591 00626 were several *Polypodium* plants with very small sori and James informed us that these had come from Tatton Park and hence could be non-native or a cultivar; we could not determine them to species level. Also, near the Ent were *Asplenium scolopendrium*, *Athyrium filix-femina*, a rather foliose form of *Dryopteris borreri* (confirmed as triploid) and some *D. dilatata*.

photo: Mike Canaway

Interesting *Polypodium* growing at the foot of the wooden sculpture known as the 'Ent'

James then led us away from the public areas, through a gap in a deer fence to the vicinity of a World War II bunker. An unusual fern here (SD74088 00739) resembled *D. borreri* but with deeply rectangularly toothed pinnules, a form referred to as *D. robusta* in the Sell and Murrell flora (2018). Flow cytometry showed this to be triploid, as would be expected for both these taxa and confirming that it was not the tetraploid *D.* ×*complexa*. Nearby we also saw *Polystichum setiferum*, *Asplenium scolopendrium* and a juvenile *Dryopteris dilatata*. After some head-scratching over the putative *D. robusta*, we were shown the oldest tree on site – an ancient sweet chestnut estimated to be 200-250 years old, on which a plant of *D. dilatata* was growing epiphytically.

We returned to the public area, and on behalf of the group Mike Canaway thanked James Hall and Mike McCann for their excellent tour including areas not open to the public. We wandered back towards the main buildings for lunch and en route saw *Cyrtomium fortunei* near a small bridge at SD7397 0042 and Roger Golding reported some *Pteridium aquilinum* at SD7392 0042. After refreshments, some members were tempted by the RHS shop whilst others enjoyed viewing the gardens independently or in small groups to round off a most enjoyable day.

Thanks to Alison Evans for the data on the *Dryopteris affinis* group, including stomatal length, and to Libor Ekrt for flow cytometry.

Reference:

Sell, P.D. & Murrell, G. (2018) *Flora of Great Britain and Ireland*, Vol. 1, *Lycopodiaceae-Salicaceae*. Cambridge University Press. p. 46.

NORTH WALES

David G. Hill

The route out of lockdown was much longer, slower and more drawn out than expected. Combined with shielding, this meant that very few social gatherings were permitted, and those only for limited numbers even outside. At the start of the year excursions were little more than solitary scouting trips, looking for suitable venues for meets.

My first proper excursion was at the beginning of April, with a visit to a steep gorge at the outflow of the **Aled Isaf** reservoir (SH9159) in Denbighshire. The Ceunant (gorge or ravine), has always intrigued me; as you drive across the dam you can see a scattered oak wood far below, preserved by its apparent inaccessibility. Having found a steep slope to descend, I had a day in the relative shelter of the gorge. I had not expected to find much, with it being early in the season, it was more a case of looking for access. The occasional primrose and opposite-leaved golden-saxifrage hinted at spring, but then a sudden white-out from a snow flurry would remind you that winter still had a role here, high up on Denbigh Moor. Polypods graced the oak branches overhanging the river, and here and there were either wintergreen ferns such as *Struthiopteris spicant* and *Asplenium trichomanes*, or the remnants of the previous year's ferns, such as *Pteridium aquilinum* and *Athyrium filix-femina*. A small *Huperzia selago* was the only lycophyte of the day, and delicate *Cystopteris fragilis* hugged the river. *Asplenium scolopendrium* and *Polystichum aculeatum* hinted at some base enrichment in a narrow band on these acidic moors, and *Asplenium viride* soon followed, only the third site in Denbighshire, with the other two being near Llangollen.

A month later I met with local member Jeff Nagle, who had kindly offered to show me around **Wepre Park** (SJ2968), Cei Connah (Connah's Quay), Flintshire, as a potential venue for a visit. Wepre is a semi-natural broadleaved woodland of oak and ash, incised by the Wepre Brook. The Friends of Wepre Park have made a small stumpery near the entrance, combining native ferns with *Dicksonia* and blechnums. *Polystichum setiferum* was emerging everywhere, supplemented with *Dryopteris dilatata*, *D. filix-mas*, *D. affinis* of various flavours, and some possible hybrids, although it was too early in the season to check. Some early strobili of *Equisetum telmateia* brightened a riverside marsh, but *Struthiopteris spicant*, although a qualifying feature of the SSSI oak wood was very hard to find. I have subsequently obtained permission to collect specimens within the SSSI, so look forward to a more comprehensive exploration in 2022.

On a blazing day in mid-July, I attended Cwm Nant-y-Benlog BioBlitz at **Gwern Gof Isaf** (SH6860) underneath the shadow of Tryfan (Gwynedd). This is adjacent to two of my *Lycopodiella inundata* sites, so provided an excuse to scout around the surrounding areas and introduce people to ferns. The fern list was not extensive (*Asplenium ruta-muraria*, *A. trichomanes*, *Athyrium filix-femina*, *Dryopteris affinis*, *D. dilatata*, *Oreopteris limbosperma*, *Pteridium aquilinum* and *Struthiopteris spicant*) and there were no surprises, but the chance to be enjoying the sunshine with like-minded individuals was a very pleasant change.

In September I had an e-mail from a local member, Allan Brandon, to let me know he had found an *Asplenium obovatum* subsp. *billotii* at **Coed Felinrhyd** (SH6539) (Gwynedd), a nice addition to the fern list for the site. I was even more surprised when he described the location – on the wall next to the entrance. I had photographed this wall, and indeed it was picked over in 2014 by the Yorkshire Fern Group (see the *Bulletin* (2014) Vol. 8, No. 1, pp. 65-67) yet this spleenwort was either overlooked or is a more recent arrival.

Having spent the morning at Coed Felinrhyd, after lunch I headed to the opposite bank of the river and the Snowdonia National Park Study Centre at **Plâs Tan y Bwlch** (SH655406) for the afternoon. Here Nigel Brown (with his Treborth Botanic Garden hat on) was leading a walk, moth trap and fungus foray! Nigel had introduced me to the world of ferns and clubmosses, and kindled my enthusiasm for the subject, for which I am eternally grateful. We walked up to Tan y Bwlch station café (SH 649415) for a paned. A good selection of ferns dotted the route, but these blended with Nigel's fervent enthusiasm and encyclopaedic knowledge of the local fungi, bryophytes, ferns, flowering plants, moths, literature, geology and history.

Over the summer I had been corresponding with Dafydd Paul, a new member and fern enthusiast who has the good fortune to live near **Cwm Llefrith** and Moel yr Ogof (SH5547), west of Beddgelert, Gwynedd. Unfortunately, our plans to meet were thwarted several times by work, weather and illness, but in the end I did manage my first visit to this strangely well visited but poorly recorded area (see the *Bulletin* (2008) Vol. 7, No. 1, pp. 34-35). The weather ranged from extraordinarily beautiful to unbelievably atrocious over the course of the day, but some nice finds included three *Asplenium septentrionale* growing near *A. viride* on a cliff, a *Polystichum setiferum* and *P. aculeatum* growing together in a waterfall, a *Dryopteris expansa* in a gully, golden *Phegopteris connectilis* in a scree bed, and an abundance of golden, meadow and scarlet waxcaps in the unimproved grasslands.

On a cold November day I visited **Arenig** (SH8338), west of Bala (Gwynedd). I had a specific target in mind: *Dryopteris lacunosa*, found by Zenner and Freigang in 2007 (Jessen *et al.* 2011). With the help of Google street view, a ten-figure grid reference and home-made crib sheet, I felt I had a good chance of finding the fern. The site has matured rapidly, and whereas Google maps showed the occasional conifer sapling, I finally managed to locate the plant in what was now closed canopy conifer woodland. It certainly stands out from other *Dryopteris*, and nearby was a beautiful selection of *D. oreades*, *D. filix-mas* and *Athyrium filix-femina* all in distinctly different autumn colours.

In December I headed to **Coed Mawr Pool Lead Mine** (SH781584) in the Gwydyr Forest north of Betws-y-Coed, Conwy, to try and do a proper count of the *Asplenium septentrionale*. It had been several years since my last visit, and I had been concerned about encroachment of conifer seedlings on the site shading out the aspleniums and lichens. I had just arrived and was planning my method, when three Natural Resources Wales ecologists arrived for a site visit. Together, Caroline Bateson, Joanna Clark, Charlotte Williams and I agreed that a full site count would be useful, as the historic records state 'many, lots, 100+' but no definitive figure. I doled out flags and we scoured the spoil, marking the populations, which we could then count and map. After two counts we agreed on 245 'clumps' – not necessarily the most scientific description of a plant, but the nature of growth and the site made it difficult to identify individuals. For a full write-up of some of the other aspects of the flora of this site, see Caroline's article in the February *British Wildlife* magazine (Bateson 2022).

Map data: Google ©2021

Coed Mawr Pool Lead Mine, showing *Asplenium septentrionale* distribution across the site

Additionally, in the digital world I ran an *Introduction to ferns and lycophytes* course online for Cofnod, and did talks on the *Ferns of North Wales* for the San Francisco Fern Society in May and the Texas Gulf Coast Fern Society in July.

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Jessen S., Bujnoch W., Zenner G. & Stark C. (2011) *Dryopteris lacunosa* – eine neue Art des *Dryopteris affinis* Aggregats (Dryopteridaceae, Pteridophyta). *Kochia* 5: 9–31.

NORTH-WEST

Brantwood, and the east side of Coniston Water, Cumbria – 19 June

Alison Evans (morning); Bruce Brown (afternoon)

Brantwood is the former home of John Ruskin, and of W.J. Linton, author of *Ferns of the English Lake Country*. The fern garden was created by Sally Beamish, starting in 1991, the year BPS members visited during the BPS Centenary. The original plantings have become rather neglected and need rethinking in some areas. We were asked by the retiring garden manager Dave Charles and head gardener Bethan Pettitt for help with identification of existing ferns, in preparation for redevelopment of the fern plantings in the garden.

Ten North-West Group members met in the Brantwood car park at SD3118 9575 on a glorious sunny morning. Dave and Bethan gave us an introduction to the gardens, and the work done by Sally Beamish in creating the fern area. After our group photo, we set off through the mountain garden, stopping to admire the *Woodsia ilvensis*, and also the *Dryopteris tokyoensis* growing there. We made our way uphill to the *Athyrium* bed, where we saw a lovely crested *A. filix-femina* Cristatum Group, then a series of plants that puzzled us. Julian Reed later very kindly gave us advice on pictures of these plants – the first was probably a sporeling of *A. filix-femina* 'Frizelliae', and the others resembled *A. filix-femina* 'Prichardii', but none of them looked absolutely typical. We moved on to a lush planting of *Dryopteris filix-mas* cultivars, with nice specimens of 'Grandiceps Wills', also a percristate form, *D. filix-mas* 'Cristata', and a crested *D. filix-mas* 'Linearis Polydactyla'. Beyond these, another crested male fern drew our attention – it had the colouring of *Dryopteris oreades*, and later examination of the stomata by Roger Golding showed that it was most probably a diploid, backing up our view that it is a cultivar of the mountain male fern, *D. oreades*. We were able to add some labels to the collection here.

photo: Bethan Pettitt

Brantwood, Coniston

Sandra Cain, Gary Mawdsley, Trevor Piearce, Carmen Horner, Trevor Lowis, Dave Charles, Bruce Brown, Roger Golding, Robert Scott, Robert Sykes, Alison Evans, Lee Jackson

After walking through a stand of magnificent *Dryopteris affinis* plants, we reached a higher level with a variety of polypodiums and polystichums. We felt that BPS members might be able to add to these collections, which have suffered some losses since Sally's time.

Following this we divided into two groups, one setting off to see the rest of the garden, and a small band setting off uphill to look for adder's-tongues and filmy ferns. Our steep climb

took us past *Dryopteris cambrensis* at SD3134 9594, and what we decided was a foliose form of *D. borreri* at SD3136 9597. On reaching a suitable flat area we made the most of the sunshine and great view whilst having our lunch, then carried on to see *Hymenophyllum wilsonii* at SD3167 9596. Continuing further along the track, we found several spikes of *Ophioglossum vulgatum* at SD3181 9598. We retraced our steps and then took a different path back to the garden, passing colonies of beech fern, *Phegopteris connectilis*, including a large one at SD3128 9530, in an area where we also noted *Oreopteris limbosperma*, *Blechnum spicant*, *Gymnocarpium dryopteris*, *Dryopteris dilatata*, *D. affinis*, *D. borreri*, *D. oreades* and *D. cambrensis.* We also admired the large plants of *Osmunda regalis* before rejoining the rest of the party.

The afternoon plan was to spend a couple of hours exploring some of the woodland along the eastern side of Coniston Water. Knowing that the public car parks would be very busy, Brantwood kindly allowed us some space for our cars in their composting area. We headed south along the narrow lake-side road, noting *Athyrium filix-femina*, *Dryopteris oreades* and the neat shuttlecocks of *D. affinis* subsp. *paleaceolobata*. On the walls were *Asplenium scolopendrium*, *A. trichomanes* subsp. *quadrivalens* and some rather shrivelled colonies of *Polypodium vulgare*. A few *Isoetes lacustris* quills were noted on the lake shoreline.

In half a mile we reached Machell Coppice car park SD310952 and its access paths into the woodland above. The woods along the eastern shore of Coniston Water are of particular note for their native populations of sessile oak and small-leaved lime, *Tilia cordata*, the latter approaching its northern limit in the UK. The damp and relatively mild habitat is ideal for ferns and bryophytes. We recorded *Dryopteris filix-mas*, *D. dilatata*, *D. borreri* and *Struthiopteris spicant*. A little higher was *Oreopteris limbosperma* and *Pteridium aquilinum* in more open areas. We diverted onto a smaller path to come across the most amazing expanse of dense *Phegopteris connectilis* and *Gymnocarpium dryopteris* growing together, completely dominating the ground vegetation and stretching well up the hillside – a most splendid sight at around SD313953. A few *Dryopteris* plants were examined with interest. *D. oreades* and *D. cambrensis* were thought very likely but merited further investigation by the experts for any hybrid potential. After reaching this highlight we retraced our steps back to Brantwood.

Wasdale (*Lycopodiella* monitoring) and Irton Woods, east of Seascale, Cumbria – 11 July

Roger Golding

In 2020 the Species Recovery Trust contacted us to ask for help in Cumbria with their monitoring programme for *Lycopodiella inundata* (marsh clubmoss). There are three extant locations in the area – Wasdale, Torver Back Common near Coniston, and Blea Moss, Little Langdale, and three other old sites where it is presumed extinct. This seemed an appropriate project for the North-West Group to take on, so this year we tackled the Wasdale site. The aim is to do one site every one to two years so that each site is visited at least every five years.

A small group of five met by the side of Wast Water at NY1511 0540. In 2018 the Wasdale site was surveyed by the Species Recovery Trust and 740 plants were counted. Using the same methodology, this year we counted around 2,163 plants, plus an additional 168 at an outlying colony, with around 500 young strobili (fruiting cones). The reason for the increase is unknown, but the population has certainly fluctuated greatly in the past, as in 2004 only one spike was located. At this site our observation was that a moderate level of sheep grazing seems to have a beneficial effect, both keeping down the level of taller grass and herbs, and dislodging and trampling small pieces of the plant which then have the opportunity to root in wet ground. As many of the plants are actually connected underground it seems to me likely that dormant or hidden plants regrow shoots above ground when conditions are favourable, and die back above ground when they are not. But I admit I don't know much about the ecology of this fascinating plant – much to learn!

photo: Alison Evans

Wasdale, western Cumbria

Ron & Nette Youngman, Terry Parr, Roger Golding

After lunch by the lake shore, we stopped off briefly at Flass Tarn (NY129034) to look for *Pilularia globulifera* (pillwort), but were unable to find any. I have since been told we may have been at the wrong part, although I remember seeing it there previously. A follow-up visit is definitely needed. To compensate, we saw an abundance of several species of dragonflies and damselflies!

We then moved on to Irton Woods, parking at NY1158 0133. At the start of the track south from NY1152 0138 we investigated an unusually dark-scaled form of *Dryopteris affinis*, from which Alison Evans took samples for further investigation. Through a field to the west of the track we found other interesting examples of the *D. affinis* group, before heading into wet woodland where there was a magnificent population of *Equisetum sylvaticum* (NY1146 0132). Here also were *Dryopteris dilatata*, *D. carthusiana*, and a good example of the hybrid *D.* ×*deweveri*. Moving on, we headed through the woods toward Parkgate Tarn, examining more forms of the *D. affinis* group on the way, including potential hybrids. Near the outlet of Parkgate Tarn we looked at the main target of this part of the walk, a group of large *Osmunda regalis* (royal fern) beside the small stream at NY1172 0053. When I came upon this colony a couple of years ago, I was surprised to find it was previously unrecorded, despite being visible through the trees from the forest track. After that a few of us made our way down the track to Parkgate Farm, while the others went back to pick up the cars and drive round to meet us. By the farm, another small tarn surrounded by marsh and wet woodland looked like a good place to explore, but that is for another day.

Great Asby Scar, south of Appleby-in-Westmorland, Cumbria – 21 August

Trevor Lowis

Great Asby Scar SSSI and National Nature Reserve forms part of the Orton Fells complex. It contains some of the finest examples of undisturbed limestone pavement in the UK – likely hunting grounds for the limestone specialist ferns. The meeting was originally planned for the 7th August but had to be abandoned due to a rare wet day forecast. A few hardy souls, however, made an initial damp reconnoitre and located miscellaneous specimens for discussion on the 21st.

After parking on the Orton to Appleby road we trekked the half mile to gain access to the reserve. Despite most of the area having been stripped for rockery stone, it was not totally

without interest. Opposite the entrance to a still-active quarry, shallow grykes yielded our first six ferns of the day: *Asplenium scolopendrium*, *A. trichomanes*, *A. viride*, *A. ruta-muraria*, *Cystopteris fragilis* and *Polystichum aculeatum.*

photo: Laurence Sutton

Great Asby Scar, eastern Cumbria

Trevor Lowis, Alison Evans, Carmen Horner, Roger Golding, Bruce Brown

(Clive Dixon also attended the meeting)

Crossing the stile into the reserve we immediately encountered *Dryopteris filix-mas* and several specimens of *D. affinis* subsp. *affinis* (NY6455 1055). These 'wood ferns' perhaps originated here when there was much more scrub cover and have survived due to the deep soils and cool root runs in the grykes. As the grazing regime has seen a reduction in sheep and increase in cattle in recent years, the scrub seems to be increasing. Several metres on into the reserve, pavements with deeper grykes revealed the first *D. submontana* of the day (NY645104). With its distinctive upright habit and grey-green colour, the rare limestone buckler fern was present at this site in abundance. Growing alongside it and almost equally abundant on the reserve was another limestone specialist, *Gymnocarpium robertianum.* As well as growing luxuriantly in the grykes, it also occurred in a more diminutive form surviving the harsh conditions on the exposed limestone clitter. *Athyrium filix-femina* was added to our tally as we moved onwards into the reserve.

Other *Dryopteris affinis* group taxa occur sparsely on the reserve and several of these were checked for ploidy, namely *D. borreri* at NY64550 10526 and a *D. cambrensis* at NY64740 10292. Alison Evans forwarded specimens of these plants to Libor Ekrt in the Czech Republic. Through flow cytometry both plants were confirmed as triploid, which was gratifying since both morphology and stomata size checks had suggested such.

After traversing the Romano British settlement of Castle Folds, we lunched on a strikingly solid area of pavement with large clints and narrow grykes. This area revealed many plants of *Polystichum aculeatum*, one *P. setiferum* (NY65411 09804) and their hybrid *P.* ×*bicknellii* (NY65412 09813).

One of our targets for the day was *P. lonchitis*, as one plant was first recorded for the NNR in 2017. Eventually we located it, but despite considerable searching no more were spotted. It is something of a mystery that populations are not greater on the reserve, when good populations occur on limestone pavement only a few miles to the south-east at a similar

elevation. A *Dryopteris affinis* subsp. *paleaceolobata* was recorded at (NY6601 0999) and confirmed as diploid through flow cytometry. A specimen of *Oreopteris limbosperma* was seen at (NY6601 0999), an uncommon plant in this habitat and indeed this proved to be a new tetrad record for NY60U.

In between areas of pavement it is not uncommon to find patches of acid grassland or acid heath, and these habitats yielded two more taxa: *Struthiopteris spicant* and *Dryopteris dilatata*. The latter is ubiquitous in the Eden Valley woodlands but very uncommon on the limestone pavements. Finally, on our return path, which took us through fields of permanent pasture, we recorded our last fern of the day, *Pteridium aquilinum*.

Meandering through this visually striking and globally rare habitat is a joy and no matter how many times you visit, the anticipation of discovery as you peer into the dark recesses of a gryke remains fresh.

Indoor Meeting and AGM, Crosthwaite Village Hall, Cumbria – 23 October

Roger Golding

Twenty-four members and guests came to this lovely spot in the Lyth Valley, the first autumn meeting since 2019, as the previous year's was cancelled due to the 'plague'. It was a welcome chance to meet up with many old friends not seen for some time, as well as some new (at least to me) faces.

Julian Reed gave a fascinating talk on polypody cultivars – he now has the National Collection of *Polypodium* at his garden and allotment (where a large polytunnel and another shade-house are stuffed with plants). In the afternoon, Alison Evans gave a talk about how the late Matt Busby's purpose-built Wardian Case has been restored and now has a new life, and on the development of a new National Collection of ferns at Edge Hill University, Ormskirk.

Both categories of the fern competition were won by Robert Crawford. Ann Haskins, Treasurer, reported that the plant sales were particularly successful, raising just over £214, which she thinks is a record – thanks to Alec Greening for managing that so well. Thanks are also due to Ann for managing the refreshments (of which there was a bounteous supply), and to Robert Sykes for negotiating the use of the hall.

photo: courtesy Laurence Sutton

North-West Group AGM, Crosthwaite Village Hall, Cumbria

Bruce Brown, Roger Golding, Robert Scott, Alec Greening, James Bowyer, Paul Evans, Trevor Pearce, Laurence Sutton, Jo Marsden, Carmen Horner, Ruth Pearce, Steve Coleman, Robert Sykes, Sandra Cain, Alison Evans, Robert Crawford, Michael Hayward, Robert Unsworth, Chris Benson, Andrew Harrison, Ian Unsworth, Julian Reed, Ann Haskins, John Wilkinson

SCOTLAND

Virtual meeting – 29 May

Bridget Laue

(*Participants:* Liza Downie, Alison Evans, Janey Floyd, Tim Godfrey, Roger Golding, Keith Gooderham, Michael Hutchinson, Frank Katzer, Bridget Laue (leader), Heather McHaffie, Chris Nicholson, Paul Sharp, Margareta Thorssell, Alastair Wardlaw, Angela Watt, Maurice Wilkins.)

While lockdown had started to ease, we took advantage of everyone's new digital skills to meet without anyone having to travel anywhere. The result was a good turnout, including members from as far apart as the Borders and the Isle of Skye, as well as 'honorary Scots' from the north of England, and even a BPS member from Sweden! After hellos and introductions, the main focus of the meeting was three short illustrated talks.

photo: Roger Golding

Screen shot of participants at the Scotland Group's virtual meeting

Heather told us that, with Kindrogan Field Centre in Perthshire closing, she had wanted to find a new home for the ferns she had been growing there. She hit upon the Backhouse Rossie Estate, near Auchtermuchty in central Fife. Heather was particularly intrigued, because one of the current owners is a member of the same family as the James Backhouses, father and son, plant collectors from the mid-19th century who were the first to describe *Athyrium distentifolium* var. *flexile*, the focus of her PhD research. Heather showed pictures of the different areas of the estate that are open to visitors, including a walled garden, an existing fern bed, and a new raised bed built with vertical logs to house some of Heather's ferns. This all looked so interesting, and Heather's description of the delights available at the café was so tempting, that we determined to visit Backhouse Rossie later in the summer (see below).

Next, Margareta talked about her experiences growing ferns in Sweden. Statistically, the climate at her home not far from the coast near Gothenburg in south-west Sweden seemed very similar to that in Edinburgh. Margareta has been collecting ferns for about 15 years, and somehow in her small garden has accommodated 250-300 different species or varieties of ferns, planted among rhododendrons and conifers. Margareta's pictures had all been taken in the recent winter or early spring; the winter had been unusually cold, temperatures getting as low as -16°C. Nevertheless, the ferns had continued to provide welcome greenery, and fronds with frosted edges, or set against a backdrop of snow, looked particularly striking. Margareta has grown many ferns from spores provided by the BPS, and remarked how sad she was that Brexit has meant that spores can no longer be sent to countries in the EU.

Finally, Roger told us about some of his latest explorations in Scotland. He is continuing to put together a detailed plan for a National BPS Meeting to be held (with luck) in 2022, the Covid-delayed sequel to the highly successful Scotland: Rarities and Specialities, Part One, which he led in July 2019. Roger described one trip in particular, to sites high on Meall a Bhuiridh, which is one of the easier Munros to bag because the Glencoe Mountain Resort ski lift takes you much of the way. There he found the aforementioned *Athyrium distentifolium* var. *flexile* (though it has been renamed *Pseudathyrium alpestre* var. *flexile*). He also collected unusual looking forms of fir clubmoss, for research being done by Libor Ekrt at the University of South Bohemia. These were later confirmed to be the first example of a diploid *Huperzia* reported from the UK – our usual *Huperzia selago* subsp. *selago* is tetraploid. The identity of these plants has yet to be established; they may be *H. selago* subsp. *arctica* (known from Scandinavia), or possibly *H. appalachiana* (as found in North America)

The general consensus was that the meeting was very successful, and we expect to zoom again in future years.

Shotts Bing, Lanarkshire – 4 July

Liza Downie

(*Participants:* Janis Antonovics, Liza Downie (leader), Mary Gibby, Tim Godfrey, Bridget Laue, Chris Nicholson, Myles O'Reilly, Paul Sharp.)

This was our first outdoor meeting after the winter lockdown and what a joy it was to meet up with old friends near the small town of Shotts, about halfway between Edinburgh and Glasgow. Heavy showers and thunderstorms were forecast, so we assembled armed with raincoats and umbrellas. Our objective was to find four clubmosses, recorded there in 2019.

photo: Paul Sharp

Shotts Bing

Shotts was once at the centre of the Scottish coal mining industry and though most coal bings (colliery slag heaps) have been landscaped, one remains at Shotts. The bing (NS876615) is very steep-sided with a loose and unstable surface, but of good botanical interest. Like many brownfield sites it contains bare ground and a succession of different habitats creating species richness. We soon identified the clubmosses, growing together in profusion amongst heather, birch and pine trees: *Diphasiastrum alpinum*, *Huperzia selago*, *Lycopodium clavatum* and a great deal of the interrupted clubmoss *Spinulum annotinum*. Together they spread over a large area of the northern face of the bing. Sadly, we were unable to locate any moonwort, though it had been recorded in 2019. Other ferns present included *Dryopteris affinis* (*sensu lato*), *D. filix-mas*, *D. dilatata* and *Athyrium filix-femina*, and the horsetail *Equisetum arvense.*

photo: Paul Sharp

***Spinulum annotinum* on Shotts Bing**

We ascended to the summit for lunch with a fine view across Lanarkshire, and took the opportunity of the break to examine the bing itself for plant fossils, one very large specimen being taken away by Tim Godfrey for further examination. Descending to the west we found a fine lowland bog where we recorded *Equisetum fluviatile* and *E. palustre*; Mary found a polystachyous form of the latter – a variant new to me, which bears cones both at the shoot terminus and on numerous side shoots. There were other delights: a juvenile newt, a small pearl-bordered fritillary, plenty of wintergreen (*Pyrola minor*), and in wetter terrain we discovered great butterfly, heath and common spotted orchids plus many twayblades.

photo: Paul Sharp

Atop Shotts Bing

Tim Godfrey, Chris Nicholson, Bridget Laue, Liza Downie,
Myles O'Reilly *In front:* Mary Gibby, Janis Antonovics

We have been inspired to examine other bings in the Scottish central belt, possibly including some from the oil shale industry, which may bear a very different flora.

Backhouse Rossie Estate, Fife, and Branklyn Garden, Perth – 17 July

Michael Hutchinson

(*Participants*: Janis Antonovics, Mary Gibby, Tim Godfrey, Michael Hutchinson, Bridget Laue, Heather McHaffie (leader), Paul Sharp.)

Instead of the usual jaunt – balancing precariously up high cliffs miles from anywhere, the Scottish group had a very genteel day, including elevenses with cream scones, a hot lunch and afternoon tea in the sunshine. I could get used to this.

Heather McHaffie was leading the trip, drawing on her involvement with donating ferns and advising on fern plantings at the garden at the Backhouse Rossie Estate in the Fife countryside (NO265121). This began when she rescued her collection of ferns growing at the former Kindrogan Field Centre and gave them to the Estate. We thought it would be good to see how this was all developing. The old Quaker Backhouse family have a history of involvement in gardens and collecting, including ferns. Heather told us that the estate houses the national collection of Backhouse cultivars of daffodils, and we found a very varied landscape with formal and decorative plantings in the walled garden, with woodland walks surrounding this. The main fern collection was in the north-facing shade of the walled garden wall. An impressive display, mostly well-labelled. Some very fine and large *Osmunda regalis* and *Cranfillia* (*Blechnum*) *vulcanica* from New Zealand. A good collection of *Polystichum*, including a lovely *P. setiferum* of the Divisilobum Group and

another of the Congestum Group (wrongly labelled conestum). Also a *P. setiferum* with narrow pinnae: possibly 'Rotundato-cruciatum'. They also had *Dryopteris erythrosora* doing well and the chain fern *Woodwardia radicans* from Mediterranean Europe. Others of note included a rather beautiful *Adiantum pedatum* from central and eastern North America, and a nice *Polypodium vulgare* 'Trichomanoides Backhouse'.

From here we ventured through the modern stone gateway into the bright sunshine of the beautifully planted walled garden, almost like going through with Alice into Wonderland. The walls were used for some traditional tree layering, but also had *Asplenium trichomanes* and *A. ruta-muraria* to make us feel at home. Potted tree ferns graced the south wall, and more ferns newly planted to Heather's directions were in the shade. In the middle were some fine *Dryopteris filix-mas* cultivars, some with double stems to the pinnae, and also the rigid buckler fern – *D. submontana*, and *Gymnocarpium robertianum*. In the centre of the walled garden we came across a clever eight-sided stone 'centromere sculpture' carved with base pairs of DNA, representing the basis for all life and the Estate's themes of art and science. In the woodland outside we found *Dryopteris* plantings and a circular raised bed, bounded with wooden trunks, where some of Heather's ferns had been recently planted. These included *Dryopteris aemula*, *Polystichum setiferum*, *Athyrium filix-femina*, a fine clump *of Dryopteris cambrensis*, and *Pseudathyrium alpestre* (*Athyrium distentifolium*). We hunted for *Dryopteris carthusiana* and possible hybrids with *D. dilatata*, which Heather had seen previously; but we found none.

photo: Paul Sharp

The centromere sculpture at Backhouse Rossie – DNA triplets spell out a coded message

Following a companionable lunch we moved on in convoy to the National Trust for Scotland's Branklyn Garden in Perth (NO125226). The very pleasing layout had many interesting plants strung out beside narrow paths along a hillside. Quite a lot of nice ferns here, but sadly none were labelled. We spotted *Osmunda regalis*, *Gymnocarpium dryopteris*, *Dryopteris erythrosora* again, and more *Polystichum* cultivars; *P. setiferum* (Divisilobum Group) 'Proliferum' was pleasing, and there were several others. We came upon a pond with a solitary large *Equisetum hyemale*; a fine specimen. We found two species of beech fern: *Phegopteris connectilis* and an unidentified second one. All in all it had been a very successful day.

photo: Paul Sharp

***Gymnocarpium dryopteris* at Branklyn Garden, Perth (with typical label!)**

Beinn Udlaidh, Perthshire – 14 August

Andy MacGregor

(*Participants*: Clive Dixon, Liza Downie, Michael Hutchinson, Andy MacGregor (leader), Mari MacGregor, Jim McIntosh, Myles O'Reilly, Paul Sharp.)

Away from mortared walls, lime-loving ferns are infrequent in Scotland owing to the unyielding geology beneath most of the country. True limestones outcrop in a few places, but among the most celebrated botanical treasure troves are the calcium-rich mica schists of the Breadalbane Hills in Perthshire. Ben Lawers is the champion of course, but the same rocks emerge elsewhere nearby, with more or less (usually less) of the same arctic-alpine botanical interest. With such a restricted distribution, it gets harder and harder to find new places for fern fanciers to explore. This year, guided by online plant records, I settled on some crags on Beinn Udlaidh, a modest (840 metres) and otherwise nondescript mountain overlooking Glen Orchy. Previous records included the elusive alpine woodsia, *Woodsia alpina*, which would surely be worth rediscovering.

My self-satisfaction at finding a new and exciting destination was punctured a few days before the trip when Paul e-mailed me to say that the BPS had enjoyed an excursion to the very same spot a mere 15 years before. More disappointing still – nay, worrying – was his revelation that I had been present at that earlier visit! Happily, the amnesia proved total, and my enjoyment of the day was undisturbed by even the faintest recollection of having been there before. And it was genuinely the first visit to the site for everyone else.

We parked in Glen Orchy (NN277367) and walked up in to Coire Ghamhnain. Joining us on this occasion was Jim McIntosh, the BSBI's Scottish Officer. As we emerged onto the open hill to spy the section of cliffs where alpine woodsia had been recorded, Jim hatched a plan to record every higher plant he could find in the entire one kilometre grid square, and soon co-opted Clive into this madcap scheme. The pair of them proceeded to scamper around the hillside like mountain goats while the rest of us sat idly chewing our packed lunches like sandwich-eating sheep. One hundred and thirty-six taxa later, they rejoined us at the crags (NN285336) where we duly found the alpine woodsia, alongside other calcicolous ferns such as green spleenwort *Asplenium viride*, brittle bladder-fern *Cystopteris fragilis*, and holly fern *Polystichum lonchitis*. The rather scarce shade horsetail, *Equisetum pratense*, was growing at the base of the same crags, and the boulder-strewn hillside below had a good range of mountain ferns including northern buckler fern *Dryopteris expansa*, mountain male fern *D. oreades*, oak fern *Gymnocarpium dryopteris*, beech fern *Phegopteris connectilis*, lemon-scented fern *Oreopteris limbosperma*, and parsley fern *Cryptogramma crispa* (evidently enjoying a less lime-rich substrate).

photo: Paul Sharp

***Woodsia alpina* in crags in Coire Ghamhnain, on the east flank of Beinn Udlaidh**

Jim and Clive had also found moonwort, *Botrychium lunaria*, which the rest of us missed, and which had not been recorded at the site for 30 years. Altogether, we accumulated a tally of 25 ferns and lycophytes, including a good spread of clubmosses: alpine clubmoss *Diphasiastrum alpinum*, stag's-horn clubmoss *Lycopodium clavatum*, fir clubmoss *Huperzia selago* and lesser clubmoss *Selaginella selaginoides*.

Blessed with a rich fern haul, and unexpectedly good weather, we made our way to the foot of the hill duly satisfied, and I resolved never to return – until the next time.

photo: Michael Hutchinson

Descending from Beinn Udlaidh

Myles O'Reilly, Jim McIntosh, Clive Dixon, Andy MacGregor, Paul Sharp, Mari MacGregor, Liza Downie

Glasgow Botanic Gardens – 10 October

Mary Gibby

(*Participants*: Liza Downie, Richard East, Mary Gibby, Tim Godfrey, Roger Golding, Michael Hutchinson, Bridget Laue, Frank McGavigan, Chris Nicholson (leader), Paul Sharp, Maurice Wilkins.)

It was a treat for a group of 11 to be able to meet together in person for our annual autumn meeting, and we were all very grateful to Chris Nicholson for organising the event at Glasgow Botanic Gardens, and providing refreshments.

The first half hour or so was a chance to chat over coffee and biscuits, and to view many plants for sale, contributed by several members, and some new fern books sent along by Frank Katzer. Then Chris took the party on a tour of the glasshouses before they opened to the public at noon. We started in the Orchid House – Chris' major responsibility at GBG – with the orchids beautifully displayed against a background of ferns including *Todea barbara* making itself at home, a large climbing *Lygodium*, neat plants of *Anemia mandiocana* and a species of *Vittaria* (*Haplopteris*), *Microsorum* sp., *Doodia australis*, scrambling specimens of *Pellaea ovata* and a mass of *Blechnopsis orientalis* below the benches. It seemed strange to see flourishing *Pellaea ovata* again, this time in the Arid House, along with *P. hastata* and *Myriopteris* (*Cheilanthes*) *bonariensis*. In the Palm House we saw specimens of *Plenasium* (*Osmunda*) *vachellii*, *Arachniodes davalliaeformis* and a large specimen of *Angiopteris*. All this before we even arrived at the Fern House! Perhaps the Fern House should be known as the *Selaginella* House, in honour of the spectacular display of several *Selaginella* species including *S. erythropus* with red, green and blueish fronds. Notable ferns included the elephant ear fern *Elaphoglossum crinitum*, and *Davallia solida*. We then moved on to the Kibble Palace to marvel at the variety of tree ferns and glistening marble statues beneath the wonderful domed roof, and a *Marsilea* thriving in the carnivorous plants section, before looking behind the scenes in Stevie Jakusz's greenhouses, and the filmy fern house full of *Vandenboschia* (*Trichomanes*) *speciosa* – Killarney Fern, *Leptopteris superba*, *L. hymenophylloides* and *Lastreopsis hispida*.

photo: Paul Sharp

***Anemia mandiocana* at Glasgow Botanic Gardens**

After lunch we enjoyed three talks. Chris Nicholson described her discoveries of adder's-tongue on Barra in the Outer Hebrides, first an isolated population and then the pleasure of discovering plants in the garden of the cottage where she stays, some in turf over rocks, others by the road. Chris expanded on the ecology of the sites, and on sexual and vegetative reproduction in *Ophioglossum*.

Richard gave an update on the fernery in Victoria Park, Glasgow, situated in an old quarry behind the building housing the Fossil Grove – stumps of 11 lycopods (*Lepidodendron*) that date back to the Carboniferous period. Richard is using his skills as a landscape architect to work with a group of volunteers from the Friends of Victoria Park to develop a garden in the quarry that reflects – as far as is possible – on what the Fossil Grove may have looked like some 360 million years ago, using hardy ferns and the trees of *Ginkgo* and *Metasequoia*. Members of the Scotland Group helped plant ferns at the site in 2019, and Richard updated everyone on how the garden had developed over the last two years, with some successes achieved by a regular group of volunteers, but also difficulties ranging from flooding to heavy footfall, especially by children during lockdown when public parks provided some of the few open spaces for people to exercise. He also described future plans, including additional plantings, and there was great enthusiasm from the audience to continue to support the project.

Bridget described her visit with Paul to Taipei in March 2020. Dr Wen-Liang Chiou from the herbarium of the Taiwan Forestry Research Institute kindly arranged for them to spend three days in the field with local botanists in north-east Taiwan. On the first day Cheng-Wei Chen was their guide, on two trails in the area south of Keelung. Despite the heavy rain and slippery terrain they managed to see (and photograph!) a wide array of species, including *Pteris grevilleana*, epiphytic *Asplenium australasicum* and the tree fern *Alsophila podophylla*. The following day, Yu-Moan Huang and Tzu-Tong Kao from Forestry Research took them to the Jingualiao Stream Fish and Fern Trail at Pinglin, laid out with signage to interpret the botany. *Asplenium nidus* and *Drynaria* (*Aglaomorpha*) *coronans* were seen here, as well as the endemic *Cibotium taiwanensis*, and button sized *Lemmaphyllum microphyllum*. On the third day they met Li-Yaung Kuo from the National Tsing Hua University, and with some of his students they explored the Chaicheng Trail, Xinding. Ferns seen included the tiny *Gonocormus minutus* with one-centimetre fronds, *Angiopteris lygodiifolia* and climbing *Arthropteris palisotii*. They also enjoyed more ferns during visits to the campus at the University of Taipei, and Taipei Botanical Garden, but a few days later they were forced to go into quarantine for a week – Covid-19 lockdown!

We ended by reviewing the Scotland Group's 2021 meetings and discussing proposals for the next year's programme. Book and fern sales had been quite brisk, and any left-over plants were claimed before we all had to depart.

SOUTH-EAST

Julian Reed

No South-East Group meetings were held in 2021. However, we did host the Cultivar Group meeting, which is reported separately, and a few of us represented the BPS and promoted ferns at a couple of shows.

Hampton Court Palace Garden Festival – 6-11 July

Peter Clare and I did a large display at Hampton Court, which with the Covid restrictions was very stressful. But we got it all built over a period of four days and got a Silver Gilt Medal and also the award for Best Plant Heritage Exhibit. A lot of *Polystichum*, *Athyrium* and *Polypodium* cultivars were displayed, covering the National Collections of *Polystichum* from Greencombe Gardens and *Athyrium* from Nick Schroder. My polypodiums were very difficult this year as they were late coming up due to the odd weather. We had help from Jude Lawton to staff the display, and made a lot of good contacts. It was good to see so many BPS members popping in, and we had a lot of interest in both Plant Heritage and the BPS.

photo: courtesy of Plant Heritage

Peter Clare and Julian Reed with their trophies at Hampton Court Palace Garden Festival

Great Dixter, Northiam, Rye, East Sussex – 2-3 October

The Great Dixter Autumn Plant Fair is a lovely plantsmen's show. Many specialist nurseries take part and it has a very relaxed feel about it. Mark Border was a saint, coming both days in spite of getting drenched on the Saturday. We managed to sell a lot of plants, courtesy of Angela Tandy at Fibrex, and we gave an even split of the profits to the BPS and to Great Dixter's Bursary fund.

SOUTH WALES AND THE BORDERS

May Hill, Gloucestershire – 14 July

Brian Dockerill

Having been required to cancel our entire 2020 programme, we decided to take the easy route and to replicate those plans for 2021. To this end we are grateful for the support of the meeting leaders and garden openers, who agreed to make this possible.

For our first meeting, we travelled to the highest point in west Gloucestershire, May Hill, arguably stretching the 'Borders' part of our group name, but rather convenient for several members living in nearby Herefordshire. Our leaders were Clare and Mark Kitchen, formerly BSBI recorders for the county and therefore well placed to know the whereabouts of the most interesting ferns.

Eight of us met at the National Trust parking area at SO6906 2216. This being our first meeting for so long, we exchanged anecdotes about our adventures the previous year, but swiftly the intervening time vanished, and we were off looking for ferns.

We set off along the single-track road beyond the parking and then, at the sign of a yellow arrow on a tree, turned right into the woodland (SO6938 2229). This was dominated by bracken, *Pteridium aquilinum*, and for a while we saw only the occasional and rather small *Dryopteris filix-mas* and *Athyrium filix-femina*, but after crossing a stile, *Dryopteris dilatata* and *Struthiopteris spicant* (formerly *Blechnum spicant*) were also noted. Then, soon after passing some *Dryopteris borreri*, came the first highlight of the day – an extensive colony of the lovely *Equisetum sylvaticum* growing in a run of wet ground on the right-hand side of the path.

Continuing along the path, the wet area developed into a ditch alongside which was an area of *Equisetum arvense* and a series of very large *Dryopteris* of the *D. affinis* group. As well as several identified as *D. affinis* itself, there were plants which had the group puzzled as to their true identity; *D. cambrensis*, *D.* ×*complexa* and robust forms of *D. borreri* all had their supporters. The decision was taken to remove a frond from each of two plants and send them to Alison Evans and Roger Golding, both very experienced in identification within this complex group of plants. We are grateful for the feedback received, confirming the first plant, at SO70016 21505, as *D. affinis* subsp. *paleaceolobata* and giving the probable identity of the second, at SO70046 21474, as a foliose form of *D. borreri*.

Several members of the group decided to explore a promising side path up to the right and were rewarded by the finding by Martin Rickard of several colonies of oak fern, *Gymnocarpium dryopteris* – new to our leaders and indeed new hectad records. We then returned to and continued along the main path where we found a single *Oreopteris limbosperma* before being taken to one previously known plant, nearby which was another new plant. Although this species is fairly frequent in the nearby Forest of Dean, it is much rarer in this area of the county and until 2018 had not been recorded in the district since 1806.

We were next taken to see an incredibly large area of *Gymnocarpium dryopteris* growing on a slope under conifers along with small plants of *Athyrium filix-femina* and *Dryopteris dilatata*. Martin (who has seen the plant rather often in the past!) declared it to be the most extensive colony he had ever been shown.

photo: Sue Dockerill

Martin Rickard and Mark Kitchen beside a large patch of *Gymnocarpium dryopteris* interspersed with other ferns

Then, fortified by lunch, we walked to the summit of the hill to be rewarded with the most extensive panoramic views from the Welsh hills, up across the border counties and right around to the Severn Estuary and the Cotswold Hills beyond. A gentle stroll downhill in the sunshine took us back to our cars. This had been a great reminder of the enjoyment of BPS local meetings, and we expressed our thanks to Clare and Mark for showing us such an interesting part of 'their patch'.

Fibrex Nurseries, Warwickshire, and Alistair and Margaret Urquhart's Garden, Oxfordshire – 24 August

Sue Dockerill

It was a great pleasure to meet so many of our fellow pteridologists for this ferny day in the Midlands. Twenty-three old friends and new arrivals met at Fibrex Nurseries at 10:30, where we were welcomed by Angela Tandy with tea, coffee and home-made cakes. Thus fortified, she gave us a short summary of the current forward plan for the nursery, which we were sad to hear would only be selling ferns for another year. However, we were pleased that this would allow Angela more time to work on a new project to make a fern garden in a one-and-a half-acre field. So, not total retirement, and even a potential future visit for the group!

As anyone who has visited Fibrex will know, as well as the glasshouse containing ferns for sale, there are many other houses scattered over the site with interesting things to be discovered. Along with some exotic ferns, Fibrex has a great range of British natives and their cultivars. As well as looking at the planting-sized ones for sale, you can see their big brothers in the display houses showing you what you can achieve if you do well. The polypodies were all just coming into growth, and I was tempted by five of them, including *Polypodium cambricum* 'Trippitt's Crested' and *P. cambricum* 'Diadem', neither readily available elsewhere. You have until next year to get yours! As always, Angela was very hospitable, and many ferns were soon on their way to new homes.

photo: Heather Key

The group at Fibrex Nurseries

Susan Lewis, Edith Morgan, Sheila Harwood, Pat Acock, Bob Brown, Gert-Jan van der Kolk, Christine Hodgson, Olive Mason (*obscured*), Caroline Robinson, Sue Dockerill, Kevan Horne, Angela Tandy, John Wayman, Roger Norman, Terry Hackwill, Claire Jenkins, Brian Dockerill, Martin Rickard, James Bowyer, Matthew Reeve

After eating lunch at the nursery, we made our way to Kidlington and the garden of Alistair and Margaret Urquhart. There we were joined by Nick and Eleanor Hards, swelling our numbers to 25. Again, our very generous hosts made us welcome with tea and cakes, but the lure of the garden soon had us spreading out. What can I say about this garden? I think it's

wonderful. Yes, it has a fantastic range of ferns, yes, they are very well chosen and grown, but as well as that they are mixed with other planting and presented in an overall layout that is deeply pleasing. We admired a wonderful pot of *Coniogramme emeiensis* where we were having refreshments. How do they manage to keep it so slug-free? Then there were two fantastic plants of *Asplenium scolopendrium* 'Crispum', their edges looking just like an Elizabethan neck ruff. And just across the small lawn was a row of three similarly goffered aspleniums, but this time with a strong yellow centre to the frond. Behind the glasshouse was a bed with a range of *Athyrium filix-femina* cultivars, including the best examples of the cultivar *A. filix-femina* 'Fibrex' I have ever seen. And the fern enthusiasm extends to other aspects of the garden. There are fern benches, fern ornaments and the small summerhouse boasts fern cushions and curtains and even fern stencilling on the ceiling. Overall, it is an object lesson in how to use and grow ferns and sends you back to your own patch thinking that you must try harder.

photo: Sue Dockerill

***Asplenium scolopendrium* 'Crispum' cultivars at Alistair & Margaret Urquhart's garden**

This trip reminded me of the pleasures of BPS meetings, so lacking during the pandemic – good company, generous hosts and lots of ferny chatter. It's good to be back!

Dare Valley Country Park, Aberdare, Glamorgan – 15 September Sue Dockerill

Once again, the weather was good as eight of us met at the Top Lake car park in the Dare Valley Country Park (SN9749 0270) for our final meeting of the year. This is an old coal mining valley, which was last mined in the 1970s and has seen much 'rewilding' since.

In planning this visit we were very grateful to Tim Rich, who provided us with a list of the ferns found in the park – a total of 27 – and information on where to look for those of most note. Of particular interest to us were the high, acid, north-facing boulder screes at the top end of the valley, which contain relict arctic/alpine flora, some (such as *Dryopteris oreades*) at their most southerly limit in the UK. In our reconnaissance of the area, we had found 26 of the possible taxa, but could we fit them all into a single visit? Well, there was only one way to find out, so we set off along the valley bottom heading for the Tan y Darren screes.

Initially, the path ran between newly colonised areas of woodland and alongside a small stream. The banks of the latter were full of the sort of ferns you would expect – *Dryopteris filix-mas*, *D. affinis*, *D. borreri*, *D. dilatata* and *Athyrium filix-femina*. *Polystichum setiferum* is not common here, but we found a rather overgrown plant in the woods to the right of the path. Tim had also told us that this was the only area in the park where *D. carthusiana* grew, and we had found a single plant on a previous visit. Luckily, we were able to track it down again at SN97360 02649 and confirm its identity from the pale scales.

The path now crossed the stream by a small bridge, where, in addition to *Asplenium trichomanes* subsp. *pachyrachis*, we saw the two polypodies the park has to offer – *Polypodium vulgare* and *P. interjectum*. On the bridge itself was a plant growing very

luxuriantly – a candidate for *P.* ×*mantoniae* (SN9731 0259). We made a note to take samples later in the year when confirmation might be possible.

In the next section of the path we found two of the horsetails we were to see – *Equisetum arvense* and *E. fluviatile*, and then, just after the path became boggy and less well defined, our third – *E. palustre*. In this area was the first plant of *Oreopteris limbosperma* – a plant which became quite common as we climbed higher – and shortly afterwards several patches of *Phegopteris connectilis*. As the path petered out, we also saw *Struthiopteris spicant* (surprisingly unusual in this location), and the start of the climb to the screes began. Most of this was through shoulder-high bracken (*Pteridium aquilinum*), but some large plants of *Dryopteris cambrensis* were also common along the way.

Finally emerging onto the screes themselves, we were on the lookout for three species – *Huperzia selago*, *Hymenophyllum wilsonii* and *Dryopteris oreades*. A few scattered plants of the clubmoss were seen on the lower parts of the scree, and then we began to see patches of the filmy fern, growing in and around the boulders, often in conjunction with moss. This is one of the best sites in Glamorgan for this species. It was first noted in 2014, and a survey of a portion of the screes in 2016 located over 50 patches. So, not surprisingly, we also found quite a few! When we eventually climbed high enough, we also found several plants of *D. oreades* (SN96501 01840) and, happy with our morning's work, we rewarded ourselves with lunch.

photo: Sue Dockerill

Members having lunch on Tan y Darren in the Dare Valley

Mark Kitchen, Brian Dockerill, Laurence Sutton, Susan Lewis, Martin Rickard, Claire Jenkins, Clare Kitchen

The descent proved as taxing as the climb, but eventually we were back at the valley floor. If you have been keeping count so far, you will note that we had found 21 of the 26 ferns we had previously located. The remaining five (*Asplenium adiantum-nigrum*, *A. ruta-muraria*, *A. scolopendrium*, *A. ceterach* and *Cystopteris fragilis*) could all be found on an old ruin – but this was on the ridge overlooking the valley and would entail climbing back up to see them. Given everyone's aching limbs, was there an alternative? Brian and I thought we could see the first three of them, even if we followed an easier route back to the cars, and that would leave us with enough energy to go to the visitor centre for refreshments. What you might call a win-win situation, and a relaxing end to an enjoyable day's ferning.

WESSEX

Appleslade Bottom, north-east of Ringwood, Hampshire – 13 May & 11 June

Andrew Leonard

photo: Andrew Leonard

***Ophioglossum vulgatum*, New Forest in May**

In May, Ashley and Jo Basil, Jurgie Schedler and I went back to check out the moonworts and adder's-tongues at Appleslade Bottom (SU18093 09327) in the New Forest, just down the road from Appleslade Car Park, Linwood. This has become an annual event.

We found 45 *Botrychium lunaria* plants in about ten patches, and around 12 patches of *Ophioglossum* containing too many plants to count. In the past, I thought we were seeing *O. azoricum* but this year the plant I photographed looked like *O. vulgatum*. I am basing this solely on the number of segments on the fertile spike (around eight in *O. azoricum* and 12 or so in *O. vulgatum*). I do not know if this is a reliable indicator. Both botrychiums and ophioglossums were very small and we wondered if the recent cold nights had retarded their growth.

photo: Andrew Leonard

***Botrychium lunaria*, New Forest in May**

photo: Andrew Leonard

Ashley Basil, Jo Basil & Jurgie Schedler searching for *Botrychium* and *Ophioglossum* in the New Forest

Recording these small plants is very difficult so I experimented with using CDs put on the floor next to the plants and trying to photograph them from the air using a Mavic Mini drone.

In June, the original gang reassembled, plus Steve Munyard. This time we only found 28 *Botrychium lunaria* plants (but including some larger, more handsome examples), in about eight patches, and around five patches of *Ophioglossum*, again containing too many plants to count. However, the ophioglossums looked like *O. azoricum*, so I am confused as to what species they are, unless both *O. vulgatum* and *O. azoricum* are present and the latter come up a bit later.

These plants grow in a field that also has bracken, which by now was about 12 inches high. The fronds had not fully unfolded, however, they still made finding the little plants more difficult. This might explain why we found fewer botrychiums than in May.

Again, I tried to record these very small plants using a Mavic Mini drone but with little success. I think I have abandoned this idea.

YORKSHIRE FERN GROUP

Brockadale Nature Reserve, North Yorkshire, south-east of Pontefract – 12 May
Bruce Brown

This meeting was initiated by Laurence Sutton following a Zoom talk by Paul Simmons, warden of this Yorkshire Wildlife Trust nature reserve. Adder's-tongue, *Ophioglossum vulgatum*, and moonwort, *Botrychium lunaria*, ferns were mentioned and Laurence obtained location details from Paul with the aim of surveying the populations there. Six members met at a convenient parking layby on Went Edge Road, SE507168, on a lovely sunny day. Barry Wright brought along a drone to assist with the survey. The path dropped down through a couple of fields colourful with cowslips and early-purple orchids to reach our allotted area in a rougher, rather brambly field where these ferns had been recorded.

Near a solitary hawthorn tree, SE506170, we came across a marker put in by Paul where the vegetation had been thinned slightly to reveal three *Botrychium* plants. Later on we found another spot with just one plant, then no more *Botrychium*. We started looking for *Ophioglossum*, seeing little at first amongst the lush grass, bramble and dog's-mercury. But soon one plant was located and then we got our eye in and the numbers built up. Eventually we totalled 14 mini-locations with clusters of *Ophioglossum* to the west and south sides of the hawthorn, which Barry marked with canes and colour-coded discs. The drone was flown to take overhead photos of the clusters. Our total so far was 95 *Ophioglossum*.

photo: Barry Wright

Monitoring *Ophioglossum* and *Botrychium* at Brockadale Reserve
Carmen Horner, Alison Evans, Bruce Brown

After lunch another *Ophioglossum* was discovered a little further to the east side of the hawthorn. A communal search led to 84 plants being found over an approximately circular area of a few metres extent. We then moved to a large ash tree at the eastern edge of the field and found more *Ophioglossum* here. Interestingly, they mostly occurred in a line along the contour of the slope, a total of 27 plants. We ambled slowly back to the road enjoying the sun and the plant diversity of this Magnesian Limestone grassland. The last time we held a YFG meeting at Brockadale was in 2006. Moonwort and adder's-tongue were noted then, and in virtually the same location, which shows the long-term stability of these populations.

Smithills Hall & Country Park, Bolton, Lancashire – 25 September Bruce Brown

The medieval timber-framed Smithills Hall dates back to the 14th century and after passing through many ownerships is now run as a museum by Bolton Council. Its 2,000 acres of surrounding country parkland stretching up to Winter Hill are managed by the Woodland Trust. Our areas of interest were the wall surrounding the formal gardens, and the adjacent Ravenden Plantation, a wooded valley following the course of Ravenden Beck, first visited by Michael Wilcox on a bryological meeting in 2019. Various alien ferns that are now

regenerating and becoming well naturalised in the woodland were of particular interest. A joint meeting with the Manchester and North Midlands Group was arranged, eventually taking place in 2021 after Covid restrictions were eased.

Nine members met in the car park at SD698119 on a rather cloudy morning with occasional drizzle but the woodland gave us good protection. We started along the garden boundary wall, some of it in the form of a 'ha-ha', with the woodland side (away from the hall) rich in ferns that had clearly been left to develop undisturbed for many years. *Dryopteris filix-mas* and *Athyrium filix-femina* were very common, but there were also a number of *Polystichum aculeatum* along with one *P. setiferum*. We checked spores for a possible hybrid but none were identified. Spleenworts appeared – many *Asplenium scolopendrium*, a few *A. adiantum-nigrum* and a colony of *A. trichomanes* subsp. *quadrivalens* further on, but *A. ruta-muraria* was rarer with just a couple of plants. A new addition since the first visit was a couple of *Cyrtomium fortunei*. This fern seems to be cropping up more often nowadays.

photo: Bruce Brown

Smithills, Bolton
Polystichum polyblepharum
growing 'wild' at the waterfall

We crossed the lawn to reach the path, dropping down through the wooded valley of Ravenden Beck. A handsome *Dryopteris borreri* 'Foliosum' was admired, and as we progressed a number of well naturalised garden plants were discovered, starting with a depauperate *D. filix-mas* possibly derived from a 'Linearis'. A few *D. affinis* of the 'Polydactyla' type were seen, with varying degrees of cresting of frond and pinna tips, but quite attractive. This was followed by a *D. cycadina*, then, more hidden in the rampant vegetation, were the shining fronds of *Polystichum polyblepharum*. *Adiantum aleuticum* was another new find since the first visit. These were in addition to the common natives: *Dryopteris dilatata*, *D. borreri*, *D. affinis* subsp. *affinis*, *Struthiopteris spicant* and *Pteridium aquilinum*.

The footbridge over the beck was garlanded with polypody fronds. On the west side was *Polypodium interjectum*, whereas those on the east side were confirmed to be *P.* ×*mantoniae*. Nearby, a number of larger trees sported epiphytic polypodies, generally unreachable, but we managed to access and confirm one as *P. vulgare*. After lunch we returned upstream to reach a track crossing the beck at another bridge adjacent to a 20-foot-high waterfall. The steep and rocky moisture-laden sides of this were well vegetated and included a few small plants of *Polystichum polyblepharum*, which here must have arisen naturally by spore dispersal. By the bridge was a good specimen of *Dryopteris filix-mas* 'Linearis', and closer to the waterfall, clumps of the unusual ornamental New Zealand hook sedge, *Uncinia uncinata*, were seen.

Finally, we arrived at the more formal garden alongside the hall where a few of the ferns seen growing 'wild' in the woodland had been planted. There were also some excellent mature specimens of *Osmunda regalis* and *Matteuccia struthiopteris*. Unfortunately the café was still closed due to Covid restrictions so we headed back to the car park, content after seeing such a good range of ferns, both natives and naturalised aliens and cultivars at this fascinating location.

Holly fern surveying, North Pennines – November/December — Bruce Brown

The Moor House National Nature Reserve covers a large tract from the Cross Fell range eastwards to Cow Green Reservoir and the headwaters of the River Tees. Much of it is heather moorland and blanket bog with occasional greener, more grassy patches where bands of limestone rock approach the surface, and large shake holes (or sink holes) can occur where water has worked its way through the peat into the more porous rock below. In some places outcrops of limestone rock have become exposed, and any suitable grykes or clefts can become niches for holly ferns, *Polystichum lonchitis*, to exploit, safe from grazing sheep. But they are few and far between, so much bog-trotting is required to reach all these sites. After a less than successful snowy foray in 2020, the area was re-visited with more purpose by BNB in November 2021 before the white stuff arrived. Two visits were required to cover all the sites mentioned in John Durkin's survey and the Cumbria rare plants register, starting from the roadside layby in Knock Ore Gill (NY714309).

Rough Sike flows through a small gorge adjacent to Moor House (NY757327), the Reserve headquarters. It was deliberately planted with holly ferns from the Scottish Highlands in the 1950s (along with some other species), a somewhat controversial operation as there were already populations of local holly ferns in the vicinity; maybe in the longer term they might introduce more genetic diversity. They have continued to thrive, with nine plants still present in 2021, some large enough to be the originals and smaller ones more recent offspring. The fate of the native plants in the shake holes and old lead mine workings has been more variable. The nine plants at the top of an old mine shaft in 2015 have reduced to three, apparently being out-competed by *P. aculeatum* and *Dryopteris dilatata* – a climate change effect of milder winters perhaps. An old mine level at Green Burn with previously seven plants now has none. On the other hand, a Knock Fell shake hole at an altitude of 815 metres has four young-looking plants, recorded as just one or two in earlier years. In total seven sites were visited and 20 plants found.

photo: Bruce Brown

Moor House NNR – Holly fern, *Polystichum lonchitis*, at mine shaft, with *P. aculeatum* and other ferns

Later in November Carmen Horner joined me for a trip to the long known Melmerby Scar site, which lies a few miles north-west of Cross Fell and is a new area for us. It is easily accessed from Melmerby village (NY615374) and we enjoyed a sunny day with great views over the Eden Valley to the Lakeland hills of Blencathra and Helvellyn. The holly fern population is restricted to a small area of block limestone scree, with much similar looking but fern-less habitat all around, which is typical for this fern. We found three well-established plants and one small younger plant, which was one fewer than recorded by Linda Robinson in 2020, so numbers must vary slightly, although over the years there appears to be a slow decline.

Finally, in December a return visit was made to the Warcop Range (east of Appleby) to check out a BSBI record in Swindale (NY7620). A side-stream, Siss Gill, has cut through a small limestone gorge and this seemed to be the most likely habitat, but a thorough search hereabouts and down to its confluence with Swindale Beck including adjacent shake holes failed to reveal any holly fern. The area has also been covered by Trevor Lowis of the North-West Group with negative results. Once again, *P. aculeatum* dominated.

John Durkin's excellent holly fern report of 2015, compiled when he was the BSBI Vice-county Recorder for Durham, has provided a good baseline for comparison with our present survey of North Pennines sites, supplemented with some records from the Cumbria Rare Plants Register, and the results can now be finalised as follows.

Survey results for holly fern, *Polystichum lonchitis*, in the North Pennines

Site	No. plants JD report	No. plants Cumb. RPR	Date	No plants YFG survey	Date
Falcon Clints	22		2011	14	2019
Cronkley	1		2009	2	2019
Moor House NNR:-					
Rough Sike	10	10	2015	9	2021
Mine shaft	9	9	2015	3	2021
Shake hole 1	2	2	2015	1	2021
Shake hole 2	1	1	2015	1	2021
Green Burn	7		1976	0	2021
Shake hole 3		several	2004	2	2020/21
Knock Fell	1	2	2010	4	2021
Warcop Range:-					
Dow Scar	7	2	2005	0	2020
Siss Gill		yes	2005	0	2021
Melmerby Scar	7	3 clumps	2010	4	2021
Old records	3		pre-1970	-	-
TOTAL	**70**			**40**	

Thus only about half of the holly ferns recorded in the 2015 report remain in 2021, with a reduction in most of the known locations. This is in contrast to the Yorkshire Dales sites that were monitored in 2018/2019 and generally shown to remain stable in the number of sites and with some populations increasing in size. Suitable calcareous habitat is more restricted in the North Pennines, with narrower bands of limestone on scars and occasional shake holes separated by large areas of acidic blanket bog. Isolated populations must largely rely on self-regeneration to keep going, and although this is clearly occurring, e.g. on Knock Fell and elsewhere, it does not appear to be quite enough to prevent gradual decline. Nearly a quarter of the remaining plants were the result of plantings at Rough Sike and numbers are relatively stable here within a walled enclosure. Perhaps more protection should be a consideration for the future at some of the other sites.

FERN MONITORING GROUP

Barry Wright & Laurence Sutton

Despite the Covid-19 restrictions, progress has been made towards getting the Society's fern monitoring group (FMG) established. Our aims are to encourage members and others to adopt a monitoring programme for ferns across the country, focusing on rare species and species under threat, either from immediate danger or from the effects of climate change.

One of our initial tasks was to find members that have an interest in monitoring and may already be doing some on an informal basis. We are contacting likely members and seeing what they are doing, and why. Once we get a feel for what is being done, and needs to be done in terms of the species we should be monitoring, we can hopefully assign species (or species groups) or sites to individuals to co-ordinate our monitoring effort. This should enable us to publish a list of co-ordinators similar to the one the Botanical Society of Britain and Ireland (BSBI) has for Vice-county Recorders and species referees – people to turn to if members wish to get involved.

One of the main tasks is to develop methods and strategies for the species, species groups and sites that we need to monitor. Monitoring protocols will be developed by one or more members drafting, adapting and testing methods. We also need to agree strategies: when to monitor – summer or winter, and how often – annually to every five years, or even more than once a year.

Some members have already made a start on monitoring methods and their work will be taken forward to use, as far as is practicable, the same methods and strategies across the country to ensure that robust data is collected and can be compared between sites. Differences in approaches will be accommodated and will be included in the methods.

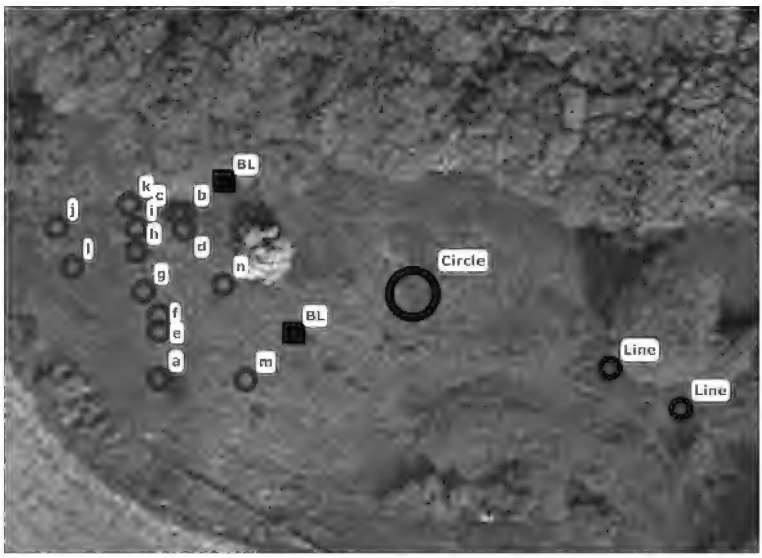
Some of the taxa and sites being looked at currently are: *Pilularia globulifera* (linked to translocation), *Botrychium lunaria*, *Ophioglossum vulgatum*, *Asplenium marinum*, *A.* ×*clermontiae*, *Osmunda regalis*, *Polystichum lonchitis*, *Woodsia ilvensis* (introductions), *Vandenboschia speciosa*, *Dryopteris affinis* subsp. *kerryensis*, *Lycopodiella inundata*, *Dryopteris aemula* and *D. submontana*. We are also working with other bodies, such as the Freshwater Habitats Trust (pillwort and marsh clubmoss), and looking for partners such as the People's Trust for Endangered Species (PTES).

For some taxa it is more difficult to set up a repeatable and reliable monitoring protocol, and some species, such as moonwort, *Botrychium lunaria*, are difficult to survey and monitor. It often grows in sheep-grazed turf (in Yorkshire mainly in the uplands but also at lower levels elsewhere) – go too late and the fronds have been grazed, too early and they are hardly visible, often less than one centimetre tall. We generally go early and take on the challenge of recording them before the sheep are let onto the fells. This had an impact initially on our surveys between Grinton and Redmire, as some observers were more tuned in than others and a number of locations were missed. We thus adopted a fixed quadrat monitoring set-up in 2009. Using a relocatable one metre by one metre quadrat subdivided into 100 ten-by-ten-centimetre squares, on hands and knees we studied every square for tiny plants of moonwort and recorded which square they were in and also their whereabouts inside the square (they were marked with cocktail sticks to make counting much easier). This led to many encounters with tourists who were curious to know what we had lost. Most were politely interested in seeing the size of plant we were trying to find, but were not sure why we spent Saturday doing that rather than watching football. We also once overheard a girl asking her father "Why are those people hoovering the grass?", as she watched me sweeping the head of the metal detector to find the buried metal plates in a remarkably domestic-like hoovering action.

The alarming aspect of the annual moonwort monitoring was a systematic decline in number (total numbers peaked at 241 spikes in our 13 quadrats in 2013), until many quadrats had zero by 2020 when only two plants were seen in the 13 quadrats in total.

This trend reversed slightly in 2021, when 22 spikes were found. We hope this recovery continues, as the decline in the past could be considered a climate change effect, whereas a continued recovery would suggest that the last ten years were a short-term fluctuation and not a progressive decline to potential extinction. Moonwort likes drier soils than adder's-tongue, *Ophioglossum vulgatum*, but too dry, or too wet, and it may decline. It may also struggle if the summers are too warm, too sunny, or the winters too cold. More data is needed.

Many protocols are likely to rely on photography to assist with showing the locations and settings of plants under study. This has now entered the modern age of drones. Andrew Leonard and members of the Yorkshire Fern Group (YFG) have been developing ways to record the locations of plants or colonies from above and also to measure patch sizes and plant densities. We have used this method with moonwort, adder's-tongue and pillwort, taking drone shots from different heights in order to plot records within the site as in photo 1 below – overview plotting of moonwort and adder's-tongue – and also at lower altitudes to record and plot plants or patch sizes as in photo 2 overleaf. As there is no chance of seeing either species even with a high resolution camera, we have adopted CDs to plot plants. Cheap white-faced CDs can either be laid on the ground for moonwort or adder's-tongue or a dried-out pond margin for pillwort, or mounted on top of garden canes in taller vegetation for moonwort or adder's-tongue or to keep the CD above water for pillwort. If all you need to know is the size of a patch, dropping a ring of CDs around its perimeter will show its size and location. For moonwort and adder's-tongue we have refined this to enable us to identify where individual plants or small patches are located by placing a colour-coded CD on top of a cane. We can then identify from the drone photograph which field record relates to which CD pattern and use these data to plot locations and abundances across the site. We divide the CD into quarters and colour each quarter differently; the combination of colours gives a unique set of CDs that can be used to link photos with field and GPS records made at those locations. The simplest way to do this is to use an indelible pen; so far we have used only three colours, red, green and blue, as well as the base white of the CD and black as two further colours. The optimum altitude for being able to look at these is approximately ten metres. We are developing techniques to enable us to georeference these locations and plot them on a geographical information system (GIS).

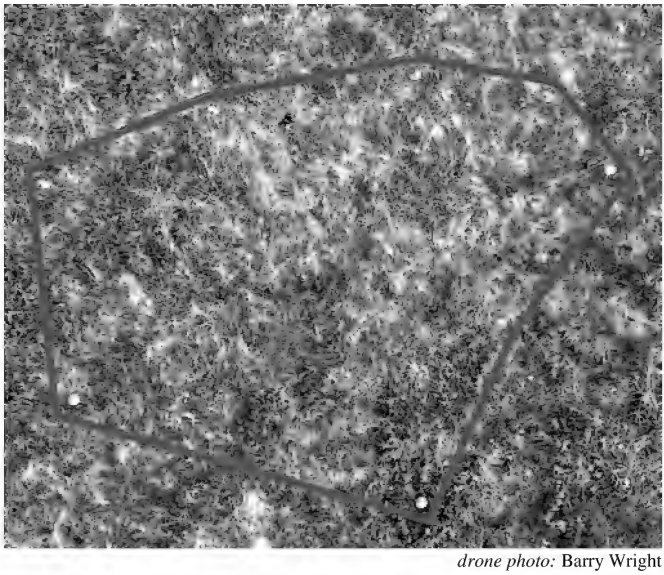


drone photo: Barry Wright

Monitoring at Brockadale YWT Reserve – photo 1

Location of moonwort (BL squares) and adder's-tongue (circles a-n) records across the site (see text for further explanation)

The photos of moonwort monitoring at the Yorkshire Wildlife Trust (YWT) reserve at Brockadale show the locations of records across the whole site as well as a focused area of a colony. Although the trust had asked us to survey and monitor moonwort, there were very few plants of it, but plenty of adder's-tongue. The first photo shows where the two species were located, circles for adder's-tongue (labelled 'a' to 'n') and squares for moonwort (BL). But there was also a patch, indicated by the word 'Circle', in which there were 84 spikes of adder's-tongue in a diffuse area which seemed to be a colony that may possibly be expanding. This circle was plotted as accurately as possible, as shown in photo 2 (right); it is just possible to see that the corners of the boundary are just outside of the locations of the coloured CDs on garden canes. 'Line' in Photo 1 was a curious series of 27 spikes of adder's-tongue in a narrow and distinct line. The only explanation we came up with was that there might be a change in geology or a slight spring line. [See also YFG report on page 122.]



drone photo: Barry Wright

Monitoring at Brockadale YWT Reserve – photo 2
Extent of a population of adder's-tongue marked by CDs

Some sort of marker is also used to monitor other species, such as holly fern and Killarney fern. The YFG has used this method over the years to make photographic records and also to record the detail of the plant(s) at the locations of the markers.

Using photographic techniques is likely to be one of the key features of the developing protocols as it is far easier to simply take a photograph and use that rather than taking exhaustive measurements of frond length and fertility. One of the minor disadvantages of this method, which can be overcome, is that a scale needs to be placed in the photograph so that the photograph itself can be calibrated to allow measurement, on the screen, of the various parameters of the plant being studied.

There is an exciting possibility for monitoring pillwort. We have recently supplied plants to Huddersfield University for genetic sequencing, and hope that eventually all we will need to do to determine the presence of pillwort in a pond is to sample the water and have it tested to see if there is any pillwort DNA present. Then all we will have to do is find the plants!

Fern monitoring is both frustrating and rewarding at the same time. We hope to engage with more members this year and set up a forum and encourage contributions from members as to what needs to be monitored and, particularly, whether they would like to be more involved and take on a species or site. There shouldn't be anything taxing in terms of identification skills needed for the majority of our monitoring proposals; good eyesight, patience and a sunny disposition are the basic requirements. And it is more fun than watching the 'footie'! If you would like to be involved, you can contact Laurence Sutton or me using the FMG e-mail address (FernMonitoring@eBPS.org.uk). We hope in future to publish our progress regularly in the *Bulletin* as well as the Society's newsletters and on the website.

HORTICULTURAL SHOWS

BPS & CARNIVOROUS PLANT SOCIETY SHOW, RHS WISLEY, SURREY – 24-25 July

Peter Blake

The new Events Hall in the Hilltop Centre at RHS Wisley played host to a show staged by the BPS and the Carnivorous Plant Society in July. This was helped enormously by the enthusiasm of Vanessa Penn of the RHS who worked with Julian Reed to create the event. The venue had only recently been completed, with laboratories, an events centre, an area for interactive learning and a restaurant. There was also a delightful roof terrace with long views over the Wisley site.

After their success at the RHS Hampton Court Palace Garden Festival, where they won a Silver-Gilt medal for their display, Julian Reed and Peter Clare created stands of hardy ferns with some magnificent specimens of *Polypodium*, *Pyrrosia*, *Dryopteris*, *Athyrium* and *Polystichum*. Equally, Jude Lawton packed a table with a wide range of interesting potted ferns from her garden in Kent, some of which were hardy and others frost tender. Pat Acock produced an impressive selection of equisetums showing the variation of form and colour in that group. Peter Blake displayed tender ferns for indoor culture ranging from those that could tolerate a mild winter outside, with some protection, to those requiring year-long tropical conditions; more than half of the plants had been raised from spores. Stuart Worth had a display of unusual tender epiphytes, including *Lecanopteris* and *Drynaria* species, as well as *Selaginella* and *Pyrrosia*. The commercial stands were all attractively arranged and manned by Jurgen and Elaine Schedler from Crawford Hardy Ferns, Tal and Niamh Williams from Maidenhead Aquatics, displaying aquatic ferns, and Angela Tandy from Fibrex, possibly making her last appearance at a plant sale.

photo: Peter Blake

BPS & Carnivorous Plant Society Show, Wisley

Looking down into the new Events Hall with BPS stands at either end and on the right, and commercial growers on the left

Despite taking place in the shadow of the third wave of the pandemic, there was considerable interest shown by the public. There was a steady stream of gardeners, students and day-trippers visiting the hall. Plant labels were photographed, leaflets were taken and memberships promised! Several BPS members came to view the displays, and it was good to see them again after all the lockdowns. Inevitably, there was much discussion and some re-labelling of misidentified ferns!

Julian Reed gave some talks and also led groups around the ferns planted in the grounds at Wisley. Lessons were learnt about how to maximise the potential of the new venue, and it is likely that this show will take place again in 2022 on 23rd and 24th July.

SECRETARIAL NOTES

Please note: *names and contact details of all officers can be found on the inside of the front cover of this* Bulletin. *Most of the information below is also on our website www.eBPS.org.uk.*

ANNUAL GENERAL MEETING 2022 – The 119th AGM will take place on Saturday 30th April 2022 at 2:00 p.m., as part of a full day of 'Taking pteridology forward' talks. The event will take place at Edge Hill University, Ormskirk, Lancashire.

SUBSCRIPTIONS 2022 – Subscriptions were due on the 1st January and should be paid to the Membership Secretary. Current rates are given inside the front cover of this issue. **Cheques** should be made payable to 'The British Pteridological Society'. Payment can also be made by **PayPal** via our website. **Standing Order** forms are available from the Membership Secretary and the BPS website. Standing Orders may be paid on 1st January or 1st February. In either case, membership is deemed to be from 1st January to 31st December. Any member whose subscription is unpaid on the 31st March shall be liable to have his/her name removed from the list of active members of the Society.

GIFT AID – As a registered charity, the BPS can claim back from the Inland Revenue 25p for every pound paid in the annual subscription for each member who authorises us to do so. In 2021 we were able to claim £1,481. This is an extremely valuable addition to the Society's annual income, and could be considerably more if all eligible members authorised it. The Gift Aid form can be found on the BPS website. Even better, **the form has only to be filled in once.** There are a small number of provisos:

1. Gift Aid is available only to members who reside in the UK.
2. Members on whose subscription Gift Aid is claimed must be paying income tax or capital gains tax at least equal to the amount claimed.
3. Members whose subscriptions are allowed as an expense in connection with their employment may not claim Gift Aid.

Please complete a Gift Aid form if you are eligible.

PUBLICATIONS BY AIRMAIL – Members outside the UK are asked to pay a higher membership fee to cover the extra postage costs of journals. Journals are sent by airmail to all overseas members. Please note that we no longer offer a surface mail option as it is currently more expensive. See inside front cover for rates.

E-MAIL ADDRESSES – These are published in the Membership List 'for members who have a relatively stable e-mail address and who keep up-to-date with their messages' (subject to a current General Data Protection Regulations (GDPR) consent). A supplementary list and amendments are published with the *Bulletin*. For e-mail alterations, please contact the Membership Secretary by e-mail.

E-MAIL NEWSLETTER – We send quarterly news e-mails to those members who choose to have e-mail communication, to remind them of BPS events and services. The information will be included in our paper mailings to those who do not use e-mail. If you have an e-mail address that you use regularly and you would like to have this service and/or you did not receive our Spring e-mail in mid-February, please inform the Membership Secretary.

NOTIFYING CHANGES OF ADDRESS – Please inform the Membership Secretary of changes of address and telephone number. She/he is responsible for notifying any other officers and appointees who need to know.

CODES OF SAFETY, CONDUCT AND DECLARATION FORM – All members attending Society field meetings should be aware of the Society's *Safety Code* and the *Code of Conduct for picking, collecting, photographing and enjoying wild plants.* Both documents were printed in the 2019 *Bulletin*, and are also available on the BPS website. For each meeting you attend, you will be required to sign a Participants Declaration form, which the meeting leader will have, whereby you agree to abide by these Codes.

PAYMENT OF EXPENSES – The Treasurer has *Rules for Seeking Reimbursement of Personal Travelling and Administrative Expenses* by Officers and Members acting on behalf of the Society. Forms for claiming expenses can be obtained from the Treasurer or website.

COPYRIGHT – All contributors to the BPS journals are required to sign an agreement assigning ownership of copyright of the article, photograph etc. to the BPS. This has the aim of safeguarding the contributors' work from unlawful copying and use. It does not stop contributors from using their own work elsewhere provided that they acknowledge the original source of publication.

GREENFIELD FUND – This fund, set up as a memorial to one of our Society's great fern growers, Percy Greenfield, is used to finance approved projects, helping with the cost of necessary equipment, books and travel expenses. Percy Greenfield's interest leaned very much towards the non-scientific side of our activities and it is felt that he would have wanted this taken into consideration when decisions are made. Workers eligible for university or college grants and similar support are not therefore eligible for help from the fund. Anyone wishing to apply for this funding can find details on our website or contact the General Secretary.

CENTENARY FUND – This fund is used to promote the study of all aspects of pteridophytes – horticultural, scientific and educational, whether by amateurs, students or professional pteridologists. As such its scope is much broader and more flexible than the Greenfield Fund. Anyone wishing to apply for this funding can find details on our website or contact the General Secretary.

THE J.W. DYCE AWARD – This award was set up to honour the memory of Jimmy Dyce who was a member from 1935 until his death in 1996. The fifteenth J.W. Dyce Award will be made at the 2022 AGM to the author(s) of the best paper, article, book or other substantial piece of work published during 2021 in any of the three BPS journals, on the BPS website or as a Special Publication. The award, which is a cash prize of £100, is open to everyone, whether professional or amateur pteridologist, horticulturalist or fern enthusiast. Members may nominate an article by contacting the Secretary by the 17th April.

PHOTOGRAPHIC COMPETITION – The annual competition is open to all members of the Society who have an interest in photography and wish to share their fern and fern-related images with others. **This year the competition will again be held online** through the Members' Area of the BPS website. Entries (which must be previously unpublished photographs) will be displayed on the website, and winning entries will be decided by members voting online. Winning entries will be included in a special feature in the *Pteridologist* following the competition. In addition, and after judging, any or all of the competition entries received may be displayed on the BPS website for general viewing. The closing date is the 31st March.

Please see https://ebps.org.uk/meetings/bps-photographic-competition-2022/ for full details.

HORTICULTURAL INFORMATION SERVICE – After the tragic loss of our long-standing Horticultural Information Adviser, Matt Busby, members requiring information and advice on any aspects of pteridophytes or cultivation should direct their enquiries to the 'What's that fern?' page on the website. If necessary it will be forwarded to others as appropriate.

SPECIAL INTEREST GROUP: CULTIVARS – The Cultivar SIG welcomes anyone with a specialist interest in cultivars. They organise field trips, speakers, garden visits and a newsletter. For information contact Julian Reed (Cultivars@eBPS.org.uk).

SPECIAL INTEREST GROUP: FERN MONITORING – The Fern Monitoring Group is interested to hear from all those keen to help with an ongoing project to establish protocols and regular monitoring of our ferns and lycophytes. For information please contact Barry Wright (FernMonitoring@eBPS.org.uk).

SPECIAL INTEREST GROUP: INDOOR AND TROPICAL FERN GROUP – The newly formed Indoor and Tropical Fern Group have a programme of talks and visits planned, and produce a biannual newsletter on a broad range of fascinating topics. To receive the newsletter, get involved or contribute, please contact Matthew Reeve or Peter Blake (iatsig@eBPS.org.uk).

BACK NUMBERS OF JOURNALS – If you have any gaps in your collection or are a relatively new member you may be interested in acquiring some back numbers of journals. A photocopy can usually be supplied if we have run out. A bargain pack is available for £7 including postage. Contact Pat Acock (BackNumbers@eBPS.org.uk) who holds the stock.

READING CIRCLE – The Society operates a reading circle for the *American Fern Journal*, a quarterly publication containing much information for those seriously interested in ferns. The *Fiddlehead Forum*, which publishes many 'ferny' items of interest to the amateur grower, accompanies it. To receive these journals please contact David Hill (Secretary@eBPS.org.uk).

ROYAL HORTICULTURAL SOCIETY – Our Society is affiliated to the RHS. This enables a limited number of members to enjoy certain privileges in connection with RHS Shows, competitions and services. Some RHS Journals are available free to members. For further information please contact the Treasurer.

BPS WEBSITE – The BPS website is the main platform for the flow of information from the BPS to its members and to the general public. The website provides information on the BPS itself and on any fern-related subject. The general public and members are invited to contribute and even create fern-related blogs without needing to join the BPS, although we always encourage new membership. The website is as interactive as is possible, facilitating all of our traditional activities online. Nearly all the activities listed on this page are accessible via the website. It is an important part of the philosophy of the website that it is inclusive and the BPS invites everyone to view, interact and contribute. Please do have a look at **www.eBPS.org.uk**. Feedback is actively encouraged to help with site development. The site also has links to all our social media accounts.

PRESERVING OUR FERN HERITAGE – Many BPS members have collections of ferns that they have built up over the years. Some will contain rare plants and cultivars that are no longer easily available. We feel that it is important to preserve these plants and collections where possible. Often, members give clear instructions as to how they want their collection to be dealt with if they are no longer able to care for it themselves, but this is not always the case. If you do have a collection, we would encourage you to complete a **'Letter of Wishes'** (this can be found on the BPS website). If you know of or have a fern collection that can no longer be cared for, we have a network of volunteers around the country who can help in various ways, such as advice on maintenance, what value it may have, how to arrange sale of plants, or re-location to a public garden. Please contact the Membership Secretary in the first instance, so that she/he can pass on your request to a volunteer local to you.

MERCHANDISE – The BPS has a lovely range of merchandise including sweatshirts, polo shirts, T-shirts, fleeces, baseball caps and ties; most of these are dark green with a small embroidered BPS logo in yellow. Other items, such as ferny greetings cards, bookmarks, pens, mugs, jute bags, fern guides and ladies' scarves, are also for sale. **New items** include a personalised trowel for your favourite gardener, and a fern-themed nightlight to keep your gametophytes company at night. Photos of items for sale can be seen on our website and ordered using PayPal. The organisers, Bryan and Gill Smith, welcome suggestions for new stock.

BOOKSALES – It is difficult to find second-hand fern books at reasonable prices, so if you are thinking of selling any of your books please consider first offering them to the Society. Frank Katzer would also be pleased to receive any donated or bequeathed books that could then be offered to members at affordable prices. Please contact him by e-mail.

PLANT EXCHANGE – This scheme enables UK members to dispose of surplus ferns to the advantage of those who would like to acquire some different species and varieties. Most of the plants offered are young sporelings. The Exchange is administered using an online system that can be accessed by members from the Plant Exchange page of the BPS website. There, surplus plants can be added to the list and the information necessary to request available ferns can be found. Contact the Plant Exchange Organisers, Brian and Sue Dockerill, for further details, or to request a current list by post. [Please contact the organisers in advance if you are based overseas, as current export situations are in the process of change. **Please note that we can no longer send material to European members through the scheme.**]

SPORE EXCHANGE – The current spore list is published on our website or can be obtained from Spore Exchange Organisers Brian and Sue Dockerill. The Spore Exchange is open from the 1st January until the end of March each year.

NURSERY ADVERTISEMENTS – Members with nurseries that offer ferns are reminded that they may place an advertisement in the *Bulletin*, *Pteridologist* and on the website free of charge in return for the inclusion of a note about the Society in their catalogues or websites. If members wish their nursery to be included, in the first instance please contact the General Secretary.

PUBLICITY & MARKETING – We are looking for individuals who can help with various aspects of publicity, social media and/or marketing. If you have a particular area of interest (shows, meetings, digital content, graphics, photography, filming, writing, illustration or other) and you feel you may be able to help in any capacity, please contact the Secretary, or Laurence Sutton (Publicity@eBPS.org.uk).

EDUCATION – The Education Subcommittee would be very pleased to hear your ideas on how we can develop the educational role of the BPS. If you have information about any fern-related educational initiatives or resources that you have found useful, please contact the Education Officer.

FERN RECORDS – Members are encouraged to record and submit fern, horsetail, clubmoss and quillwort records whenever possible. Records can be submitted directly to the BPS Recorder, Fred Rumsey, via e-mail (Recorder@eBPS.org.uk) or using the BPS recording sheet, or via the BPS website using the Living Record page. The BPS recording sheet is available on our website or directly from Fred.

FORTHCOMING EVENTS IN 2022:

Details of all local and national BPS meetings can be found on the website. The BPS national meetings programme features on the last page of this *Bulletin*. Please consider helping with or supporting the following public events with BPS stands. **NB: Please liaise with event organisers, as if the Covid situation changes, events may be subject to change at short notice.**

NEC GARDENERS' WORLD LIVE, 16th-19th June. The BPS will have a stand, and we will be promoting the appreciation of ferns, fern growing and of course, the benefits of being a member of the BPS. Volunteer help is needed, please contact Gill and Bryan Smith on Education@eBPS.org.uk.

SPECIALIST PLANT SOCIETIES SHOW, RHS Wisley, 18th-19th June. An opportunity to showcase our activities. Please contact Jude Lawton if you can help or bring ferns, or for more details (judelawton@aol.com).

BIG FERN EVENT & CARNIVOROUS PLANT SHOW, RHS Wisley. 23rd-24th July. Joint BPS Hardy and Tender Ferns and Carnivorous Plant Society Show Weekend. Please contact Julian Reed to be on the rota or help out (julianreed@waitrose.com).

SOUTHPORT FLOWER SHOW, 18th-21st August. Once again the BPS will be entering and supporting this show. Please contact Alison Evans for more details (acl.evans@btinternet.com).

FERN COURSES IN 2022:

FSC PRESTON MONTFORD, Shropshire, 7th May. Wildflowers and ferns of limestone woodland, a day course at intermediate level. Tutor: Mark Duffell.

LAS CRUCES AND LA SELVA RESEARCH STATION, Costa Rica, 7th-23rd June. Two-week residential Tropical ferns and lycophytes course. Tutors: Robbin Moran, Eddie Watkins and Alejandra Vasco. See https://tropicalstudies.org/course/tropical-ferns-and-lycophytes/

FSC RHYD-Y-CREUAU FIELD CENTRE, Snowdonia, 8th-11th July. Fern identification, a residential course for beginner and intermediate level. Tutor: David Hill.

UNIVERSIDAD COMPLUTENSE MADRID, Spain, November or December (dates tbc). Curso de Identificación de Helechos, a week-long course covering Spanish fern identification.

Courses can be booked through the appropriate organisation's website. Please also see the Society website, where we will add details of courses as we find them. If you become aware of events that may be of interest to members, please send details to the Secretary.

ANNUAL GENERAL MEETING 2021

MINUTES of the 118th Annual General Meeting of the British Pteridological Society held on Saturday 24th April 2021 by Zoom digital conferencing at 14:00 hrs.

IN THE CHAIR: The President, Dr Alison Evans.

PRESENT: Pat Acock, Peter Blake, Mike Canaway, David Cann, Rob Cooke, Linda Craddock, Peter Cummins, Brian & Sue Dockerill, Peter Elcock, Gordon Finch, Mary Gibby, Mandy Gluth, Roger Golding, Anne Green, Vanessa Griffiths, Terence Hackwill, Nick Hards, Ann Haskins, David Hill, Jennifer Ide, Elise Knox-Thomas, Bridget Laue, Andrew Leonard, Susan Lewis, Howard Matthews, Alison Paul, Valdy Pierozynski, Julian Reed, Matthew Reeve, Martin Rickard, Paul Ripley, Paul Sharp, Bryan & Gill Smith, Brian Stockdale, Matt Stribley, Laurence Sutton, Robert Sykes, Alice Taylor, Erica Thomson, Robin Walls, Alastair Wardlaw.

The President opened the meeting by thanking all those volunteers who keep the Society running smoothly. For this AGM, she thanked David Hill for arranging the technology, Sue Dockerill for preparing the paperwork, Bryan Smith and Andrew Leonard for setting up the online photographic competition and especially Peter Blake and Julian Reed for offering to provide the two post-AGM talks. In this difficult year she was also grateful to Alison Paul for the work needed to produce the *Bulletin* when much of the usual content was not available and to Peter Elcock for preparing the *Bulletin* index, which was so useful to members.

It was a shame to have yet another AGM that was not face-to-face, but a positive was that we were able to include people who might find travelling to a physical meeting difficult. It was lovely to see so many taking part this year.

Item 1 – APOLOGIES FOR ABSENCE: John Edgington, Eleanor Hards, Ann Robbins, Barry Wright.

Item 2 – APPROVAL OF THE MINUTES: Minutes of the 117th Annual General Meeting of the British Pteridological Society (covering 2019) held on Saturday 3rd October 2020 and published in the *Bulletin* (Vol. 9, No. 1) were approved and signed by the President.

Item 3 – MATTERS ARISING: There were none.

Item 4a – REPORT OF THE GENERAL SECRETARY: The report by David Hill was published in the *Bulletin* (Vol. 9, No. 1). It had been a strange year for the Society, with limited getting together in person, but plenty of online activity. The inclusion of many overseas members in these events was a bonus. The Committee had moved to online meetings as well and he thanked them for their support for this. The website and other online channels such as YouTube, Facebook and Twitter were all very important and he thanked Andrew Leonard for his speedy and timely support keeping the website up to date. Finally, he noted that we had some vacancies for Officer and Committee posts and requested that people consider if they could help in this way, or perhaps with an article for one of our publications.

Item 4b – REPORT OF THE TREASURER: The Society's accounts for 2020 were published in the *Bulletin* (Vol. 9, No. 1). Peter Blake started with thanking both Peter Grimbly and Barrie Buels for the support and help they had given him over the year. The effect of the pandemic had been to reduce the Society's outgoings, so we had in fact had a

surplus of around £2,500 over the year. He had also set up internet banking, which was proving invaluable both to him and to the Membership Secretary.

Alison Evans noted that we needed a replacement for Peter, but that the support of Peter Grimbly meant this may not involve as much specialist knowledge as people might fear.

Item 5 – OFFICERS' REPORTS: The Officers' Reports were published in the *Bulletin* (Vol. 9, No. 1). The following summarises any updates and discussion at this meeting.

Membership Secretary. This was the last year that Ann Robbins would be standing as Membership Secretary, so now was a great time for a successor to work with her for a year's handover period. Alison Evans noted that it was a role which, while being a fair amount of work, also had the reward of making a lot of contacts with fern enthusiasts all over the world. As with Treasurer, there was also scope for the work to be divided between more than one person to lighten the load.

Meetings. Rob Cooke asked whether there was a provisional national meetings programme available to be implemented if conditions allowed. Bryan Smith replied that he had not done this to avoid a repeat of last year's wasted efforts. It was better to rely on local groups, which were more able to respond quickly. An example was reported by Roger Golding, who had researched a possible Scotland Rarities trip for later in the year but felt that obtaining accommodation at short notice if Covid restrictions lifted may be a problem for such a national meeting.

Julian Reed reported that the Society would have a stand at Wisley in July and that the Cultivar Group hoped to hold a meeting in the South-East in September. It was noted that the Southport Show had now been cancelled for this year.

Bridget Laue requested that details of any events be sent to her for publication on the website.

Website Co-ordinator. Once again, the fantastic support of Andrew Leonard was noted. Alison Evans encouraged anyone with expertise to come forward to help. New ideas were always welcome, and we could never have too many suggestions for online content.

Education. Gill Smith reported that it had been a quiet year, for obvious reasons. The liaison with The Field Studies Council had stalled due to the impact of the pandemic on their activities, although Andrew Leonard had prepared some online presentations for them.

Publicity and Communications. Alison Evans gave a huge thank-you to both Sophie Walwin and Franziska Wittenstein who had done so much for our publicity and communications over the past year. Sadly, neither was able to continue so any volunteers for this role would be very welcome.

Item 6 – COMMITTEE APPOINTEES' REPORTS: The Committee Appointees' Reports were published in the *Bulletin* (Vol. 9, No. 1). The following updates were given:

Spore and Plant Exchanges. These will be impacted by Brexit; plant materials sent to Europe now require a phytosanitary certificate. We were not alone in feeling the effects and the RHS was co-ordinating a response to Government from plant societies. Details and options would be discussed at the next Committee meeting. To a question Brian Dockerill responded that requests sent to the US were covered by a 'Small lots of seed' system, which removed the need for phytosanitary certificates.

Merchandise. Gill Smith reported that it had been another good year for merchandise, with online orders making up for the loss of sales at shows and events. Bryan Smith also commented that this would be the last year a calendar would be produced as sales had been very low.

Horticultural Information Adviser. Alison Evans reported that, after many years in the role, Matt Busby was standing down. She warmly thanked him for all his work. For the future, she noted that many questions were now received via the website and this was likely to remain the case.

Archivist. Julian Reed expressed his thanks to our Archivist, Michael Hayward, for all the support he has provided to him and other members over the past year.

Cultivar Registration Working Group. Despite the name, this is currently just Roger Golding. Julian Reed and Ian Unsworth may be recruited and the current scope of *Polypodium* cultivars may be extended to include *Athyrium*. There was some discussion of what authority the group had over cultivar names, and it was agreed that its role, scope and membership should be reviewed at the next committee meeting.

Item 7 - ELECTIONS

President-Elect. Rob Cooke was standing for election. Proposed by Mary Gibby and seconded by Martin Rickard with no votes against.

Vice-Presidents. John Edgington had served one term and Robert Sykes and Roger Golding had both served three. They were all willing to stand for a further three-year term. Proposed by Rob Cooke and seconded by Jennifer Ide with no votes against.

Our other Vice-Presidents are Matt Busby and Adrian Dyer. Rob Cooke had stood down to allow his election as President-Elect.

Officers. Publicity and Communications Officers: neither Sophie Walwin nor Franziska Wittenstein were standing for re-election and no nominations had been received. All other Officers were available for re-election en bloc: this was proposed by Julian Reed and seconded by Rob Cooke with no votes against.
[**General Secretary**: David Hill, **Committee Secretary**: Sue Dockerill, **Treasurer**: Peter Blake, **Membership Secretary**: Ann Robbins, **Meetings Secretary**: Bryan Smith, **Conservation Officers**: Fred Rumsey & Heather McHaffie, **Publications Secretary**: Martin Rickard, ***Fern Gazette* Editor**: Mary Gibby, ***Pteridologist* Editor**: Alec Greening, ***Bulletin* Editor**: Alison Paul, **Website Co-ordinator**: Bridget Laue, **Education Officer**: Gill Smith.]

Elected Committee Members. Brian Dockerill, Elise Knox-Thomas, Julian Reed, Laurence Sutton and Barry Wright were standing for re-election en bloc: this was proposed by Rob Cooke and seconded by Gill Smith with no votes against.

Later in the meeting Matthew Reeve expressed an interested in joining the Committee and will be invited to the next Committee Meeting.

Committee Appointments. Matt Busby had stood down as Horticultural Information Adviser. There were no other changes.

Item 8 – APPOINTMENT OF INDEPENDENT EXAMINER

The President expressed her thanks that Barrie Buels was willing to continue as Independent Examiner.

Item 9 – AWARDS

J.W. Dyce Award: David Hill thanked those who had sent nominations for this, the 14th award and announced the winners as follows:

3rd Ian Unsworth: The discovery of apospory (*Pteridologist* Vol. 7, Part 1)

2nd Fred Rumsey, A. Hendy & K.E. Jones: *Asplenium* ×*vogelii* (*Asplenium azoricum* × *A. trichomanes* subsp. *quadrivalens*) (Aspleniaceae) a new endemic hybrid spleenwort from the Azores and the relationship and origins of its endemic parent, *A. azoricum.* (*Fern Gazette* Vol. 21, Part 4)

1st Rolf Thiemann: *Polystichum* ×*ida-klodeae*, a new fern hybrid (*Pteridologist* Vol. 7, Part 1)

Photographic competition: With the help of Andrew Leonard, this had been carried out online and had received a gratifying number of entrants and votes. Bryan Smith announced the winners as follows:

Class 1: Fern(s) in a natural (wild) landscape

1st Alison Evans – *Athyrium distentifolium* in Glen Feshie

2nd Paul Sharp – *Dipteris conjugata*

2nd Sue Dockerill – *Pteridium aquilinum*, near Talybont-on-Usk

Class 2: Cultivated fern(s) in a house, greenhouse or garden

1st Paul Sharp – *Blechnum gibbum*

1st Paul Sharp – *Davallia mariesii*

2nd Fred Rumsey – *Pteris vittata*

2nd Elsbeth Vorstenbosch – *Blechnum brasiliense* 'Crispum'

Class 3: Item or object with a fern-related theme

1st Wim de Winter – *Pyrrosia-lanceolata* – darkfield-2-10×

2nd Elsbeth Vorstenbosch – Ceramic pot made by Annie, plus young *Woodwardia*

The entrant with the most votes overall was Elsbeth Vorstenbosch.

Honorary Membership: The President announced that this was to be awarded to Pat Acock for his support of the Society over many years. She felt this was extremely well deserved – Pat had been a member since the 1960s and a key contributor to very many of its activities over all that period, too many to list here. A full citation is given on page 151 and a personal presentation will take place at the next face-to-face AGM, alongside last year's recipients.

Outstanding Contribution Award: Alison Evans went on to announce that Michael Hayward was to receive this award in recognition for his authorship of two Special Publications and many articles, his extensive work on the BPS Archive, his contribution to the restoration of the Southport Fernery, and many years of running the BPS stand at Southport Flower Show. Again, a formal presentation would take place at a future AGM.

Item 10 – AOB

None.

There being no other business, the President closed the meeting at 15:08 hrs.

Sue Dockerill
Committee Secretary

BPS ACCOUNTS FOR 2021

	2020	2021
ORDINARY ACCOUNT		
INCOME		
Subscriptions (*see note 1*)	£20,361.12	£19,496.69
Booksales (*see note 6*)	£131.30	£546.00
Merchandise (*see note 6*)	£1,788.59	£1,220.91
Publications (*see note 5*)	£3,924.16	£2,101.81
Pteridologist	-	£55.50
Inland Revenue Gift Aid	£1,258.25	£1,481.28
Donations	£443.00	£936.71
Plant Sales & Spore Exchange	£210.00	-
Prize Money	-	-
Miscellaneous	£68.06	-
TOTAL INCOME	**£28,184.48**	**£25,838.90**
EXPENDITURE		
Pteridologist	£5,467.54	£8,926.16
Fern Gazette	£4,277.97	-
Bulletin	£6,469.59	£6,834.49
Printing & Stationery	-	£100.00
Administration & Postage	£1,058.05	£756.28
Subscriptions to Societies	£145.00	£95.00
Plant & Spore Exchanges	£172.52	-
Merchandise (*see note 6*)	£1,598.66	£1,198.17
Publications (*see note 5*)	£5,245.14	£725.00
Trustees' Expenses (*see note 7*)	£140.00	-
Booksales (*see note 6*)	£382.07	£4,246.99
Special Awards	-	£551.30
Autumn Mailing	-	£1,185.26
Website	-	£18.87
Promotion & Advertising (*see note 4*)	£180.00	£34.09
Insurance	£355.20	£371.10
Donations/returned overpaid fees	-	£25.00
Bank Charges (*see notes 2 & 3*)	£490.60	£577.86
TOTAL EXPENDITURE	**£25,982.34**	**£25,645.57**
Balance (income minus expenditure)	**£2,202.14**	**£193.33**
Brought Forward from previous year	£33,806.52	£36,008.66
Total in Ordinary Account	**£36,008.66**	**£36,201.99**
RESERVE FUND		
Brought Forward from previous year	£20,265.20	£20,327.07
Interest	£61.87	£3.38
Total in Reserve Fund	**£20,327.07**	**£20,330.45**
CENTENARY FUND (Restricted Account)		
Interest	£18.85	£1.03
Interest brought forward from previous year	£590.81	£609.66
Total Interest	**£609.66**	**£610.69**
Capital brought forward from previous year	£5,583.73	£5,583.73
Total in Centenary Fund	**£6,193.39**	**£6,194.42**

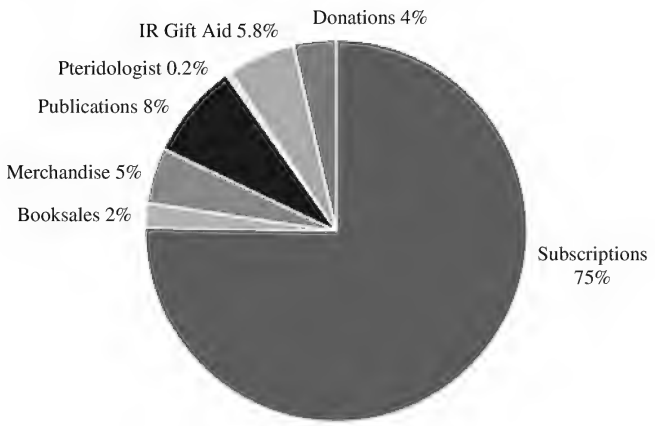
	2020	2021
GREENFIELD FUND (Restricted Account)		
Interest	£8.28	£0.45
Interest brought forward from previous year	£1,660.72	£1,669.00
Travel Grant	-	-
Total Interest	**£1,669.00**	**£1,669.45**
Capital brought forward from previous year	£1,051.00	£1,051.00
Total in Greenfield Fund	**£2,720.00**	**£2,720.45**
GRAHAM ACKERS FUND		
Brought forward from previous year	£14,838.62	£14,883.92
Interest	£45.30	£2.49
Total in Graham Ackers Fund	**£14,883.92**	**£14,886.41**
SUMMARY		
Ordinary Account	£36,008.66	£36,201.99
Reserve Account	£20,327.07	£20,330.45
Centenary Fund	£6,193.39	£6,194.42
Greenfield Fund	£2,720.00	£2,720.45
Graham Ackers Fund	£14,883.92	£14,886.41
Total Funds	**£80,133.04**	**£80,333.72**
REPRESENTED BY		
Charitable Organisations Investment Fund (COIF)	50,991.99	£50,999.34
NatWest Bank & Others	£29,141.05	£29,334.38
Total Funds	**£80,133.04**	**£80,333.72**

NOTES TO THE ACCOUNTS

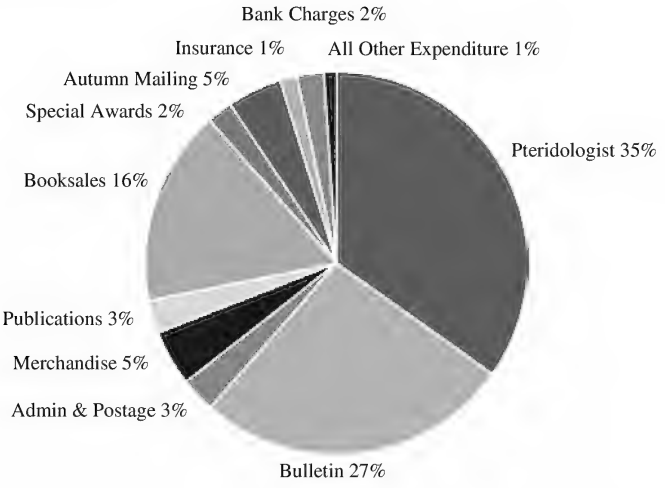
1. The accounts reflect the subscriptions received in the year.
2. Transaction charges are levied by NatWest and PayPal. All payments received via PayPal into the bank are net of the bank charges included here. Payments received via NatWest are received gross and the charges included here are levied separately.
3. The Society is now using internet banking as some service providers are no longer accepting cheques.
4. Promotion and advertising were reduced in 2021 due to the Covid-19 restrictions. There was a reduced number of shows and displays.
5. There were no new Special Publications in 2020 or 2021. Income was reduced in 2021 at £2,101. Residual stock is valued at £14,400.
6. Merchandise stock is valued at £1,500 and Booksales at £9,520 with an additional £2,118 capital. These accounts are reviewed by the Treasurer.
7. The AGM and Committee meetings were held on Zoom, with consequent savings on travel expenses.

Peter Blake, Treasurer

INCOME 2021



EXPENDITURE 2021



BRITISH PTERIDOLOGICAL SOCIETY
INDEPENDENT EXAMINER'S REPORT FOR THE YEAR ENDED 31 DECEMBER 2021

I report to the trustees on my examination of the accounts of the above charity for the year ended 31 December 2021.

As the charity's trustees, you are responsible for the preparation of the accounts in accordance with the requirements of the Charities Act 2011 ('the Act').

I report in respect of my examination of the charity's accounts carried out under section 145 of the 2011 Act and, in carrying out my examination, I have followed all the applicable directions given by the Charity Commission under section 145(5)(b) of the Act.

I have completed my examination. I confirm that no material matters have come to my attention in connection with the examination which give me cause to believe that in any material respect:

- the accounting records were not kept in accordance with section 130 of the Charities Act; or
- the accounts did not accord with the accounting records; or
- the accounts did not comply with the applicable requirements concerning the form and content of accounts set out in the Charities (Accounts and Reports) Regulations 2008 other than any requirement that the accounts give a 'true and fair' view, which is not a matter considered as part of an independent examination.

I have no concerns and have come across no other matters in connection with the examination to which attention should be drawn in this report in order to enable a proper understanding of the accounts to be reached.

Independent Examiner: Barrie Buels FCCA FCIE, 10 March 2022
Crestmere Limited, Chartered Certified Accountants

REPORTS OF OFFICERS & COMMITTEE APPOINTEES FOR 2021

OFFICERS' REPORTS

GENERAL SECRETARY – David Hill

Change is inevitable, and a lot can change in twelve months. Over the last year the Society has adapted well to a changed world, we've lost good friends but made new ones. Despite the temporary loss of field meetings, we have maintained our membership, and benefited from fresh ideas from new committee members. The future for the Society is looking positive.

The year started with a Committee meeting, again online rather than in person, followed a few months later by an online AGM. Thanks for their contributions go to Steve Munyard who stepped down from the Committee, and Sophie Walwin and Ziska Wittenstein who stood down from the Publicity Officer role. Rob Cooke was voted in as President-Elect, marking the final year of Alison Evans' presidency, and I'm sure it was not quite the same as she had originally envisaged!

Shortly following the AGM, we were greatly saddened by the death of Matt Busby. After meeting him at the Hull AGM, my wife described him as "a very friendly and welcoming old-fashioned gentleman, in the true sense of the word", and one who will be missed by all those fortunate enough to have chatted with him. The Society is certainly poorer without him.

May and October saw further online Committee meetings, and over the course of the year we had a few new additions to the Committee – co-opted pending official nomination in Ormskirk at the end of March. Peter Madders has been learning from Ann Robbins the intricacies of managing the Membership, Jonny Lamb will be shadowing Peter Blake to take on the mantle of Treasurer in 2023, and Matthew Reeve has thrown himself (or been dragged by Peter Blake) into the newly created Indoor and Tropical Fern Group. Laurence Sutton has enthusiastically taken on the challenge of the quarterly newsletters with much gusto, as I'm sure you will have noticed.

I could easily list every member of the Committee here, as they have all helped or been working away in the background, often unacknowledged and unseen, but all greatly appreciated. The amount in the following reports testifies to all the quiet beavering away behind the scenes.

Another unforeseen set of positives to come out of the pandemic has been the forging of closer ties with the Hardy Fern Foundation and other online groups. The evening talks via Zoom and the Autumn Meeting on Ferneries have been both fascinating and bridge-building, and I look forward to them becoming a permanent fixture. If you have any ideas for talks or would like to join any of the groups or the Committee just to see what goes on, please do get in contact.

To end on a positive note, I am greatly looking forward to the Spring Meeting and AGM. The programme is packed with some fascinating speakers, and I'm looking forward to seeing people in real life, and hopefully meeting many of you there.

MEMBERSHIP SECRETARY – Ann Robbins

During 2021, 83 people joined or rejoined the Society, and there were two new family members. Of these, 64 live in the UK, 13 in Europe and six in the Rest of the World; 61 are full members, eight are 'optional' members and 14 are students.

During 2021, 151 people left the Society: 123 lapsed, 22 resigned and sadly six died: Mr Jack Hubert in January, Mr Matt Busby in April, Mr Grant Fortune in June, Dr David Larner in August, Ms Jenny Hakney in September and Mr John Grue in November.

As of 31st December 2021, we had 674 'Active' members plus 57 family members. This was made up as follows:

Full members	473
Optional members	125
Honorary members	10
Complimentary members	6
Students	21
Subscribers	39

I have enjoyed my few years as Membership Secretary. Our Society has an international reputation, which is reflected in the membership. Many new members have joined during the lockdown period; I hope they can all start getting out on field trips in 2022. I am delighted to have found a suitable successor who will take over in April, subject to approval at the AGM.

MEETINGS SECRETARY – Bryan Smith

As a result of the on-going Covid pandemic (that much-used phrase) the meetings programme in 2021 was again essentially curtailed, and most of the meetings we had hoped might be carried forward from 2020 didn't take place. So, this report is short.

The AGM was held virtually in April and, as well as the usual business part, included talks on indoor ferns and on fern cultivars, and the results of the online Photographic Competition. We also held the Autumn Meeting virtually in November, comprising several presentations on the theme of Victorian ferneries. Only one National Meeting was held face-to-face – the Cultivar Group's visit to fern gardens in the South-East in September, and some of the Regional Groups also managed some fieldwork. We also held our usual Fern Weekend at Wisley in July – this time in their new Events Hall in the Hilltop Centre along with the Carnivorous Plant Society. All these gatherings (virtual or real) are reported elsewhere in the *Bulletin*.

The Meetings Subcommittee did not hold its usual annual get-together, but liaison was maintained by e-mail, and a provisional programme for 2022 was included in the Autumn Mailing – albeit with few firm details. Hopefully though, these details will be enough for members to express interest and indeed be able to participate. Also, it is hoped that Regional Group leaders will be able to participate when we do eventually have an online planning meeting for future events.

PUBLICATIONS SECRETARY – Martin Rickard

As ever, the Society's journals have been brilliant – even fuller than usual. All Editors, Mary Gibby (*Fern Gazette*) Alec Greening (*Pteridologist*), Alison Paul (*Bulletin*) and their teams, are to be heartily congratulated. See their reports included here.

Apart from the Journals there has been, and will be, a lot of activity with Special Publications. One on *Asplenium scolopendrium*, by Tim Brock and another on *Athyrium* by Ian Unsworth are progressing well, but we can make no promises as to when they will appear; these are not quickly compiled books as they require a lot of research. I am sure both end-products will be worth the wait.

For the more distant future I think we should be looking to produce companion volumes on as many garden ferns as possible. These might include one on *Dryopteris* species and cultivars for the gardener, another on 'odds and ends' that have not been covered elsewhere, e.g. *Blechnum*, *Cystopteris*, *Woodsia*, etc. Another possibility is a Special Publication on indoor and conservatory ferns. We have several very good private collections of this type maintained by very knowledgeable growers. Such books were quite frequently released in Victorian times, but very little has been published since.

Pat Acock keeps us informed of sales of our Special Publications, which are selling well despite the lack of face-to-face meetings. We expect a surge in sales when we actually meet again and can peruse each book before purchase!

Plans for the new British fern flora to be produced jointly by the BPS and the Botanical Society of Britain and Ireland (BSBI) have changed a little. The author, Fred Rumsey, moved house in 2021, which not surprisingly took up a lot of his time. The publication wanted by the BSBI is a field handbook, which would be great, but after much discussion our Committee feels a more ambitious compilation is needed. There have been several field guides over the last 50 years with the most recent being James Merryweather's excellent *Britain's ferns*. It is not proposed that our book will be in the BPS Special Publication series; an A4 hardback is likely. Graham Ackers' legacy has been ring-fenced for this book.

FERN GAZETTE EDITOR-IN-CHIEF – Mary Gibby

I am pleased to report that we continued to receive a healthy number of submissions on a range of fern and lycophyte related topics, and members of the editorial team and other experts kindly undertook the task of reviewing the manuscripts. Two parts of the journal were issued during 2021, in May and December. Our usual publishers ceased business in August, and I am most grateful to Andrew Leonard for ensuring a very smooth transition to a new company.

PTERIDOLOGIST EDITOR – Alec Greening

2021 was an unusual year for the *Pteridologist*. By the closing date for articles I had very little copy, so I put out an appeal to my regular authors. The result was amazing! I now had enough for a bumper edition of 120 pages, but there was a downfall. My printer informed me that they would have to use a slightly thinner paper in order to get the weight down so that it fitted into the lower postage rate that we normally use. The Executive decided that this was a retrograde step and gave permission to print two editions in celebration of the 130th year of the Society.

So, the first edition was published in July with 80 pages. It had a wide variety of articles, ranging from National Collections to ferns from all over the world. The supplement edition was published in October with 40 pages. Again, we had reports of a National Collection and of ferns from all over world along with many articles on cultivars. A big thank you to Alison Evans, who tackled the proof-reading because my professional proof-reader was no longer available.

The 2022 issue already looks very promising. If you have an article that you would like published, please contact Chris Evans as soon as possible at receiving@eBPS.org.uk and we will do our best to include it in this edition.

BULLETIN EDITOR – Alison Paul

Since almost all Society meetings were cancelled again in 2021, this *Bulletin* is inevitably somewhat slimmer than usual (76 pages). Thanks are due to Pat Acock for offering his account of the Society's overseas excursions. All being well, next year it will be 'business as usual'! I am most grateful to our printers, Aysgarth Services, for coping, as always, with my tight deadline!

WEBSITE CO-ORDINATOR – Bridget Laue

Once again the BPS website saw significant activity, with over 42,000 users, a large majority of them new, half from the UK and the rest from 180 other countries. In 2021, more than ever, the website proved to be essential because everyone was using the internet, for so many reasons. In-person meetings were limited again, but you can find interesting virtual meetings, lectures and programmes relating to ferns, all accessible from the BPS website; these are listed on the left side of the home page. There was a healthy number of sales of merchandise and Special Publications using PayPal on the website, as well as an

increase in membership subscriptions; these website PayPal transactions represented 41% of total BPS income. A new feature was the Fern Hardiness Survey. This was quite successful in getting 83 people to contribute records for over 400 ferns. The survey is still open, and anyone can contribute, either from new or to edit and save their existing list. As always, a huge thank you is due to Andrew Leonard for both his content contribution and his vigilance and technical skills applied to management of the website. As the website is run by volunteers we do not pay for management of the site. However, we have added a new mechanism (VPS) to speed up response times, with a cost of £50 per annum. More detailed analyses will be presented at the AGM.

The website is also linked to our social media groups, which can be accessed using the icons on the left-hand side of the home page. Fern World on Facebook, @BPS.FernWorld, managed by Alison Evans, now has 2,374 followers. Over the next few months, Fern World will be compiling a comprehensive photographic list of all the featured British native ferns and lycophytes. There are also some specialist fern groups on Facebook run by BPS members, such as the *Polypodium* cultivars group, the *Polystichum* group, the *Athyrium filix-femina* cultivars group, and the *Dryopteris* species, hybrids and cultivars group. These are great places to discover new things and keep up to date with what is happening in the cultivar world. We also have a dedicated YouTube channel – search for British Pteridological Society on YouTube, to find a range of informative videos. Our Instagram account is managed by Chris Nicholson and has 2,540 followers. All these accounts invite viewers back to the BPS website for more information. David Hill manages the BPS twitter account (@FernBPS), which has 3,091 followers. As always, we welcome feedback, participation and contributions.

CONSERVATION OFFICER – Fred Rumsey

Consultation has now concluded on proposals put forward for the Quinquennial Review of the Wildlife and Countryside Act, 1981, whose schedules list those species for which protection is to be given and those whose deliberate introduction would result in prosecution. In our warming world there is a suite of primarily aquatic species that have long been in the horticultural trade and hitherto have been considered of low risk of invasivity, but which now, in our virtually frost-free winters, may not be kept in check should they escape. I have recently been engaged to look at the genus *Azolla* in trade. The now widespread *A. filiculoides* is seen as a menace and its sale is prohibited, while the more tender species previously known as *A. caroliniana* is not so restricted. The two are difficult to distinguish when sterile and have been much confused, so there are concerns that material traded online may not be correctly named. In any case, although not yet definitely recorded in the wild here, the more tender species is increasing in continental Europe and could become equally problematic. As mentioned in my Recording round-up, the Australasian *Marsilea hirsuta*, an invasive species that has caused concerns in Florida (and was famously mistaken as an endemic in the Azores), has survived for over five years in a Warwickshire wildlife pond. It remains unlikely that this, or members of the genus *Salvinia*, which prove so damaging elsewhere in the world, will have an impact here, but members are reminded to be careful when disposing of plants and to keep an eye open for escapees.

On drier land, an alien species that bears careful consideration is *Hypolepis ambigua* (pig fern), first discovered by Angus Hannah on the Isle of Bute. While still only known there and with its origin still unclear, this species would have the potential to have an impact on natural communities and species composition, as does the similar but native bracken. Keeping a watchful eye on it might be one project that the BPS's burgeoning Fern Monitoring Group may adopt. It is really gratifying to see the growing interest in monitoring (see Barry Wright and Laurence Sutton's report), and I really hope that members will seriously think about taking up this challenge. One of the species for which monitoring work is already being undertaken and where Society members have been very

influential in developing monitoring protocols and novel techniques is *Pilularia*. Some work on this was funded by Natural England in 2021, looking at practical problems for monitoring this species and what is meaningful to record, and it is hoped that this work will be further developed and trialled in 2022.

Natural England, under its Species Recovery Programme, has also continued to fund work on one of our most threatened and vulnerable species, *Dryopteris cristata*. Sadly, because of the pandemic it has still not proved possible to do a detailed national re-survey to look at changes in the seven to eight years since the last one was attempted, but monitoring work continues at its disjunct Surrey/Berkshire population and at the re-introduction site at Wybunbury Bog, Cheshire. Following site visits by FJR and members of the Yorkshire Fern Group, another past locality, Askham Bog near York, has been assessed for a potential re-introduction. Suitable habitats have been identified and young plants are now with Professor Alastair Fitter pending approval for re-introduction to commence. Once again on-going monitoring there could be taken up by the Society.

Such re-introductions, while not always successful, if carefully considered can still be very informative. In this category we might put *Woodsia ilvensis* if reports from its recent Steering Group meeting are to be believed. Re-introductions at a number of sites in Scotland and England have resulted in a high proportion of losses and still little, if any, sign of natural regeneration. Many plants, however, do survive and all we have learnt from this species here indicates that we need to consider long timeframes. Encouragingly, the largest British population, on the Wasdale screes, is increasing without supplementation, although molecular work being carried out at RBGE has shown this population to be low in genetic diversity, a factor that had always been thought responsible for the species' inability to recover from the predations of the Victorian period. We clearly still have much to learn! Members have helped previously with monitoring the Teesdale re-introduction sites of this species and it is hoped that this important work will continue. Who knows – while doing that the long lost *Cystopteris alpina*, which once grew nearby, might be refound!

EDUCATION OFFICER – Gill Smith

I am happy to report that there was a bit more activity in 2021 than in the previous year, although everyone was a bit cautious in their approach!

A talk on *Fern fever* was given on Saturday 30th September by Mary Gibby and Bridget Laue at Hospitalfield, Arbroath, to celebrate the restoration and recent re-opening of the fernery, which was originally completed in 1870. The informal talk was to volunteers and Friends of Hospitalfield, a Trust dedicated to contemporary art and ideas that was established by the last private owner of Hospitalfield House and Estate, Patrick Allan-Fraser, on his death in 1890. Mary covered Pteridomania in all its forms and also spoke about Benmore Botanic Garden. Bridget covered the Victorian fernery at Ascog Hall on Bute and then went on to some details of fern cultivation. A lively discussion followed!

Peter Blake has for some time been interested in growing ferns indoors and been asked to give talks on this subject. At the end of 2021, he had discovered that new member Matthew Reeve was also very interested in growing tropical ferns. Following discussion, they decided to go into print and started up a new Group – the Indoor and Tropical Fern Group. Between them they produced their first newsletter, plus a calendar of events for the next year. If you are interested, please contact Peter or Matthew directly.

Alison Evans ran some fern workshops for students at Edge Hill University, and David Hill ran an online course – *Introduction to ferns and lycophytes* – in April and August. There was not much progress with the Field Studies Council about the online fern courses, but little was expected until Spring 2022. There was a joint BPS and Carnivorous Plant Society Show at Wisley at the end of July, which was well attended. Jude Lawton gave three talks

about ferns to local garden societies and was booked for two more; she commented that ferns seem to be very popular!

There will be a lot of events to promote in 2022 – the first face-to-face AGM for two years will be at Edge Hill University in Ormskirk – a full programme has been prepared. An RHS Plant Society stand at Wisley in June and the BBC Gardeners' World Live at the NEC, also in June, will need volunteers to help out. A joint BPS and Carnivorous Plant Society Show is scheduled for July, and finally, the Southport Flower Show in August will also need volunteers to help man the stand.

If you have attended an event in which you have promoted our Society, please send me details so that we have a record for our archive. My grateful thanks go to all those who give their time to help with running the various BPS events, shows, training and meetings – especially to the Education Group members, you know who you are!

PUBLICITY & COMMUNICATIONS OFFICER – Laurence Sutton (co-opted)

Since Sophie Walwin and Franziska Wittenstein left the fold as Publicity Officers after their excellent newsletter of spring 2021, there remained an air of uncertainty, chilled further by pandemic viral uncertainties. The remedy promulgated by our President – to keep up the momentum with a summer newsletter – somehow claimed my interest and time, and I have endeavoured to keep the ball rolling!

The Autumn 2021 Newsletter I feel succeeded in engaging many across the regions through their local groups. This is beneficial to the Society, by giving a chance to all members to steer the Society's direction. By all observations, members' enthusiasm appears to be in robust health!

I see the Newsletter as not only providing the customary annual procedural updates but to function as a signpost, illuminating activities across the regions. I realise that several Regional Groups produce their own excellent newsletters, published on the BPS website. The newsletter can alert members directly to them, and from what I have read, they would not be disappointed!

Finally, if elected at the AGM as Publicity and Communications Officer, I hope to engage all members as reporters! Without you and the BPS officers there would be no news!

COMMITTEE APPOINTEES' REPORTS

RECORDER – Fred Rumsey

It is difficult to follow the excitement of last year, when Rory Hodd made the amazing discovery of *Stenogrammitis myosuroides* (Kerry mousetail fern) in the Killarney National Park. The discovery of this tiny neotropical grammitid posed many questions, not least over its status and likely time of arrival on this side of the Atlantic. Considered to be an overlooked native, and therefore with a good claim to be Europe's rarest and most threatened fern, it was thus particularly exciting to hear from Rory in October that he had found another small population, with six individuals though only one was fertile. Subsequently another plant was independently found in the same wood by a young Kenmare botanist. Some four kilometres from the previous find, the ecological similarities and the remoteness of the locations do much to strengthen the view that the species is native. As to the possibilities of it being overlooked for so long, suffice it to say that many have set off in its pursuit following last year's report of its discovery, but few have succeeded in locating this particular inch-long needle in the Atlantic cloud-forest haystack (although at least one past-President has been successful).

The ability of ferns to colonise sites far distant from their usual range has led to the exciting arrival of several other species in unexpected places. Urban walls have provided sites for

scarce natives, as well as an increasing array of alien garden escapes. The disjunct and all too often ephemeral occurrences of the former have, in earlier editions of the Atlases of the British Flora, been treated as 'introductions', a view being challenged in Atlas 2020, now in production. While some persist, such as the *Asplenium septentrionale* (forked spleenwort) that has grown on a small bridge on the Romney Marshes for well over 40 years, others rapidly fall foul of renovations and repairs. It is heartening to hear that some manage to return, whether from fragments, or from spores shed by the removed plants. Helena Crouch reports that the *Asplenium marinum* (sea spleenwort) in Bath, believed lost following cleaning operations, has managed to stage a comeback. Even more pleasing to me was to hear from Alison Paul that the *Asplenium viride* (green spleenwort) that I first found on Ravenscourt Park underground station in 1995, which was apparently lost for several years following cleaning and summer drought, had returned by 2021 behind the same signalling gantry.

An alien first brought to my attention several years ago by the BSBI's Warwickshire Vice-county Recorder John Walton was finally identified this year, thanks to the molecular lab of my friend Hanno Schaefer in Munich. The *Marsilea* (water clover), which had initially been thought to be the declining European native *M. quadrifolia*, instead proved to be the Australian *M. hirsuta*, a species invasive in Florida and known from the Azores, where it had previously been regarded as a treasured endemic, *M. azorica*. First recorded beside a recently created wildlife pond at Baddesley Ensor in 2015, where it is presumed to have been inadvertently introduced with other commercially sourced aquatics, the persistence of this exotic species through many winters is remarkable. It is unlikely ever to be anything other than an intriguing novelty here and I see no great virtue in ripping it out, but it will be interesting to see whether, in our warming world, this and other aquarists' throw-outs such as *Salvinia* species start to take off and then give greater cause for concern.

Following publication of a paper clarifying many past errors in identification of the hybrid clubmoss *Diphasiastrum* ×*issleri* (Rumsey, Metherell & Metherell, 2021), it was interesting to receive material from Ambroise Baker, collected on Danby Beacon in North-East Yorkshire. This has proved, like plants from Northumberland, to be atypical etiolated *D. alpinum*. It is still, however, a great record, as this was last found in the vice-county back in 1988 and had disappeared by 1991.

No fern round-up would be complete without straying into the critical world of the *Dryopteris affinis* complex, the scaly stuff of dreams – or nightmares, depending on your viewpoint. While taxonomic authorities argue over what rank we should be according these apomictic taxa, the growing group of those interested in these plants have at least generally reached a consensus on the defining characters for the main forms encountered. Detailed anatomical study backed by flow-cytometry carried out by Alison Evans, in conjunction with Libor Ekrt and others, has helped elucidate ploidy levels (the number of sets of genomes possessed), an important step in understanding the evolution and relationships of these handsome ferns. This work has revealed that the plant previously known to some as 'morphotype arranensis', on account of its abundance on Arran, and treated by Stace in his third edition as *D. cambrensis* subsp. *pseudocomplexa* because it was believed to have affinities with that triploid taxon, is actually a tetraploid and probably not particularly closely related to *D. cambrensis*. Treating it as a distinct species, as in Sell and Murrell, seems preferable. The presence of this species in Co. Waterford has recently been confirmed by Alison Evans and Roger Golding at a site known to the late Ken Trewren, who did much to aid the identification of this group through his now out-of-print illustrated Special Publication on them. Roger has gone on to find both *D. pseudocomplexa* and another very rare and poorly known species, *D. pseudodisjuncta*, at Stromeferry in Wester Ross. This latter plant was first recorded by Ken at Kirkbean Glen, Dumfriesshire, but it transpires it had been found some decades before at Stanley Ghyll in the Lake District by

Anthony Pigott (Pigott, 2021). It was also found on Arran by Tony Church, but as yet is unknown elsewhere in Britain. This striking and robust plant with some helpfully distinctive characters – the long tapering toothless pinnules and a dark-centred indusium – should be looked for elsewhere. Another of the *Dryopteris affinis* group that Roger has proved very adept at finding is *D. kerryensis*. Having made the first British record of this in Ennerdale, he has gone on to find additional sites there, and more recently near Rydal. While scouting for the forthcoming Scottish BPS meeting and hunting accessible sites for *Woodsia alpina*, he again came across *D. kerryensis*, new to Scotland, on cliffs at Lochan na Lairige. It would seem that this fern, until recently thought to be endemic to south-west Ireland, may be much more widespread, limited less by temperature than by rainfall.

References:

Pigott, A. 2021. *Dryopteris pseudodisjuncta* in England. *BSBI News* 148: 3-5.

Rumsey, F.J., Metherell, C. & Metherell, H. 2021. *Diphasiastrum ×issleri* (Lycopodiaceae) in England and Wales. *British & Irish Botany* 3(1): 33-51.

SPORE EXCHANGE ORGANISERS – Brian & Sue Dockerill

These statistics give an overview of the main Spore Exchange for 2021.

	2013	2014	2015	2016	2017	2018	2019	2020	2021
No. taxa in list	374	441	503	459	452	405	402	384	401
Orders received	99	115	98	96	135	155	164	146	171
Packets supplied	1,548	2,015	1,703	1,568	2,331	2,486	2,664	2,324	2,683
No. first choices supplied (%)	1,276 (82%)	1,795 (89%)	1,526 (90%)	1,400 (90%)	2,024 (86%)	2,077 (83%)	2,220 (85%)	1,927 (83%)	2,305 (86%)
No. donors	35	31	32	32	39	36	40	35	38

We are pleased to say that the Spore Exchange continues to be popular, with a record number of orders in 2021. Due to the requirement for phytosanitary certificates to import spores into the EU, we will not be sending spores to the EU in 2022 and await the effect of this on the numbers. Our European members have been strong supporters of the Exchange in the past, and we want to record here our gratitude for the huge positive impact they have had.

We again supplied spores to the Seed Exchange of The Hardy Plant Society.

We continued to supply short viability spores separately, and the statistics for this are shown below.

	2016	2017	2018	2019	2020	2021
No. taxa donated	9	11	11	13	13	5
No. donors	4	6	7	7	6	2
No. packets supplied	40	30	39	63	67	14

There were fewer donors and spores donated under this scheme than in previous years. It is, in any case, based on a small number of genera and so is naturally limited in scope.

As always, we are very grateful to the spore donors, without whom there would be no Exchange. If anyone is interested in becoming a donor, we are very happy to offer advice, or they can look on the website for help.

PLANT EXCHANGE ORGANISERS – Brian & Sue Dockerill

The following gives some statistics for the current web-based scheme.

	2016	2017	2018	2019	2020	2021
No. taxa available	32	22	62	44	48	29
No. donors	6	5	5	7	8	8
No. taxa wanted	19	25	41	49	67	53
No. requestors	5	8	13	15	18	16

The Plant Exchange continues to list a reasonable number of ferns, and many of these are requested – of the 29 available in 2021, 11 are not currently listed as they are used up. As in the previous year, we feel this aspect of the system is working well, albeit on a moderate scale.

For plant wants, the number requested has fallen, primarily because we have removed the outstanding requests (19) from lapsed members. Overall, this aspect of the system is working less well, possibly because the plants requested do not seem to be available within the membership. We would encourage all members to look at this list and see whether they are able to meet the needs of their fellow members.

Both aspects of the Exchange are advertised in the Autumn Mailing and other communications, and with all spores sent out from the Spore Exchange.

We also offer to send out a paper list on request, and again one person took advantage of this.

BOOKSALES ORGANISER – Frank Katzer

Last year, 2021, was not as quiet as the previous year for BPS Booksales, as despite not attending any face-to-face meetings myself, I still managed to sell books with the help of Yvonne Golding and Bridget Laue. I acquired book collections from Jennifer Ide (donation), some of Matt Busby's books (bequest), and purchased book collections from Sarah Whittingham, Frank McGavigan and Elaine Liquorish. I also obtained copies of the *Monograph of Moranopteris* from the American Fern Society, and Martin Rickard's *Ferns for a cool temperate climate*. Unfortunately, I was unable to get a good deal for the new book by Rémy Prelli and Michel Boudrie – *Les Fougères et plantes alliées d'Europe* and it was cheaper on Amazon. Booksales had an income of £546 but made an overall loss of £3,700.99 due to the purchase of book collections. I hope to make Sarah Whittingham's and Frank McGavigan's books available by auction during 2021, possibly at the Autumn Indoor Meeting, and I will provide more details about the process in the coming months. If you are interested in obtaining a list of these books, then please send an e-mail to me and I will circulate the book list and information about the process when available. As always, I would be grateful if you could let me know if you become aware of any new fern books before they are published, so that I can contact the publishers in order to get a better deal for our members.

BPS Booksales always welcomes donations and bequests of books or offers to purchase either individual books or whole book collections. Please keep in mind that the prices offered cannot be internet prices but if you sell books to dealers, they will not offer sales prices either. To contact me please use my work e-mail: Frank.Katzer@moredun.ac.uk or alternatively the Booksales e-mail: Booksales@eBPS.org.uk. I can also be contacted by post: Frank Katzer, Highfield House, Muirburn, Skirling ML12 6HL, Scotland, or by phone 0044 (0)1899 860 307.

BACK NUMBERS OF JOURNALS ORGANISER and SPECIAL PUBLICATIONS SALES – Pat Acock

During the lockdown years we gained a good number of new members, which increases the potential for sales. Towards the end of 2021 there was renewed interest in our older journals as well as the early Special Publications. Do not be caught out by not catching up on the reasonable price of our back numbers; it is so much harder to track them down later as second-hand copies from dealers. Many of our longer-serving members use these resources to research historic and cultivar articles they are writing.

Our Special Publications once again sold well. The second edition of *Polypodium cultivars and species* was our best seller (39 copies), closely followed by *Fern albums and related materials* (19 copies) and *Polystichum cultivars* (18 copies). *Fern names and their meanings* and *Who found our ferns?* sold 11 and seven copies respectively, *Fern books and related items* sold six copies, *History of Pteridology* sold five, *The British Pteridological Society abstracts and reports* sold four, and *The Jones nature prints* sold two copies. Many of these were bought by people in other parts of the world, particularly Germany and the USA, but also Australia, Belgium, Ireland, The Netherlands, Poland, Portugal and Sweden.

MERCHANDISE ORGANISERS – Bryan & Gill Smith

This is a very short report! Again, in 2021 we maintained a steady flow of orders through the early lockdown period, but once people started to get out and meet up again, the orders dwindled. We had 45 orders via the website plus a few via post; most were for the UK, with a couple from the USA and Germany.

We didn't attend any face-to-face meetings during the year, so there was no chance for people to see and be tempted by our Merchandise! However, we have had very positive feedback about the wide range of items that we stock from some of the new members who sent us orders! Sales of the 2021 calendar were very poor and we were left with about half our stock. Unsold merchandise is a drain on the Society's funds, and after discussion at the October Committee meeting, it was sadly decided to discontinue this line.

We are hoping to get along to some of the meetings planned for 2022, with Merchandise items for people to see. The AGM at Edge Hill University will be the first opportunity, so please remember to bring some money with you and look out for the Merchandise stall!

A big thank you to all those who have supported us. If you have ideas for any other items that you think would enhance our list, please contact us on Merchandise@eBPS.org.uk.

ARCHIVIST – Michael Hayward

A collection of ephemera and fern nursery catalogues were received from the late John Barnett; the collection includes all the preparatory work for his own fern catalogue from the late 1970s. Physical access to the archive was not possible until late autumn when I was able to take the new acquisitions and update the filing.

Requests for information received in 2021 were chiefly for details or photographs of early Society members, and information about specific fern cultivars or collections. These types of information are readily provided from the digital archive.

If you have any items that you would like to donate to our archive, please get in touch with me. Good photographs of individual Society members, past or present, would be particularly useful. Photographs of groups are less useful to future generations, unless all the individuals are named. I can scan and return items to you if you so wish. Images in the archive are stored in jpeg format, with the minimum of compression. Images of documents are scanned in multipage pdf format.

CULTIVAR REGISTRATION WORKING GROUP – Roger Golding

Matthew Reeve has been developing a web-based database that will facilitate collaborative work on this project (it also has potential wider applications for the BPS). The focus now is to edit the mass of information in the existing database before transferring it to the new one.

AWARDS

HONORARY MEMBERSHIP – PATRICK ACOCK

At the AGM in 2021 Honorary Membership was conferred on Patrick Acock for his services to the BPS and to pteridology.

I first met Pat Acock at a BPS field meeting held at the Field Studies Centre in Rogate, West Sussex, led by Clive Jermy, in 1983. It was the start of a friendship I feel privileged and honoured to have.

Pat, like his wife of 50 years, Grace, was born and brought up in St Mary Cray in Kent, and has lived there all his life. His passionate loyalty to St Mary Cray has extended to his many interests (not least, Nottingham Forest FC and the Bluebell Railway), but crucially to his many friends, and of course to the BPS.

Pat's first job was as a paint chemist with the local firm, Coates. His innovative, yet practical approach to the chemistry undoubtedly made and saved the company millions of pounds. He then changed course and trained as a teacher, working for more than 20 years as Deputy Head of a junior school in a less-favoured area of Orpington. While there, he led the chess club and managed the football team, both with many successes against more privileged opposition.

His practical skill, combined with laboratory experience, led Johannes Vogel to offer Pat voluntary work at the Natural History Museum after his retirement. For Pat it was a labour of love, and Monday morning would see him taking the train to London for his stint in the laboratory, preparing for example, samples for DNA analysis; it also gave Pat the chance to make good use of the museum's herbarium and library. When work in the lab was no longer possible, he continued his Monday visits, helping Alison Paul in the herbarium.

Pat's first love was natural history, fired by an intimate knowledge of his locality. Apart from ferns, he is very knowledgeable about butterflies. He joined the BPS in 1969, which makes him one of the longest-standing members of the Society. He was fortunate to have part of London's green belt on his doorstep, including Petts Wood, much of it managed by the National Trust, and Scadbury Park, now owned by the Borough of Bromley but in Elizabethan times, the home of the Walsingham family. He has led a number of fern meetings there and I remember seeing *Ophioglossum*. He has monitored the population of this fern at High Elms, near Farnborough (Kent) for many years. Pat campaigned against the scandalous culverting of the River Cray, the last of the unspoilt classic chalk streams that rise in the North Downs and drain into the Thames.

Pat became particularly interested in horsetails and is the BSBI referee for this group. He has become a world expert and we look forward to seeing the book he has been assiduously working on for some years. His practical and laboratory skills allied to his knowledge make his interest special. He also took a particular interest in the relationships within European and North American *Dryopteris*, a classic example of reticulate evolution within the pteridophytes. He gained a thorough understanding and resolved virtually all the relationships. Collaborating with Wim de Winter, they produced a wonderfully graphic and illuminating representation.

Not far away, in Tulse Hill, is the South London Botanical Institute, a unique establishment based in a large, late-Victorian house. It has a library, herbarium and laboratory facilities, and hosts talks, courses and study days. For many years its doyen was Frank Brightman, a larger-than-life figure who used to come on many of our South-East Group meetings. He befriended Pat and allowed him to use the SLBI's facilities with Jim Crabbe while working on his Certificate, then Diploma in Ecology and Conservation.

These and other contacts got Pat firmly into the Society's orbit. Clive Jermy lived nearby, in Otford. A surprise and kind invitation in December 1983 for Pat and I to visit his and Alma's house and fascinating garden, led us (naively as Pat puts it) to be persuaded to form the South-East local group of the BPS. We ran the Group for 30 years before passing it to the capable

hands of Julian Reed and Peter Clare, long-term supporters of the Group. An autumn planning meeting, arranged with typical Pat efficiency and with dates mapped out on a year plan, saw the year's activities planned in an hour or two. It all dove-tailed into the National (and latterly the East Anglia Group) programme. All that remained was to contact the proposed leaders at each venue. Everything was done in good time for another cup of tea and very often a home-cooked meal. Pat and Grace are the most hospitable of people, as many members can testify.

There was a time in the '50s and '60s when the Society was sustained by a few stalwarts such as Jimmy Dyce. It was really held together by Matt Busby, who we have a lot to be grateful for, but younger members such as Martin Rickard and of course Pat, formed the basis for the current healthy state of the Society.

Pat was always a key figure in organising meetings and he became Meetings Secretary in 1996. It was a pleasure to be associated with his direction of the Society's meetings programme. Always in good time we would meet at a member's house in the previous autumn. Pat came prepared with maps of previous sites visited, and copies for everyone of a calendar that would be populated with suitable dates. Without the slightest element of coercion, duties would be assigned, either as leaders or coordinator. Meetings always finished with plenty of time to enjoy the member's garden and ferns and to partake of a splendid meal.

Pat is without doubt a consummate 'people person', and his contacts in the UK and overseas definitely facilitated the organisation of meetings and the smooth running of the programme. It was during his time as Meetings Secretary that the Society introduced regular overseas meetings into the programme, and he led some of them himself – to Madeira on two occasions for instance. Seattle, USA (2003), Trinidad (2004), NE Spain (2005), Réunion (2006), Costa Rica (2008), Australia (2009), Northern Italy and Japan (2014), and Vercors in France (2015) are just some of the highlights from an impressive selection of these overseas trips. He was a key figure in the liaison with and organisation from the UK of meetings of the Group of European Pteridologists (GEP). His contacts in the United States facilitated successful joint meetings with the Hardy Fern Foundation, such as those in California and Texas. [Pat's own reflections on all these trips abroad can be found at the beginning of this *Bulletin*.] He also played a role in the very considerable organisation involved in the International Symposia organised by the Society, such as *Pteridology in perspective* in 1995, and *Fern Flora worldwide – threats and responses* in 2001.

A meeting attended by Pat is always a delight – his enthusiasm and obvious enjoyment are infectious. It was his spirit of adventure that no doubt stimulated his interest in overseas trips. But Pat is always the first to scale the cliff-face, or climb the tree in search of a frond for identification. It has sometimes got him into trouble. Always first across the plank bridge, I have seen him fall in some fast-flowing water on more than one occasion!

For 35 years Pat has been handling some aspect of the storage and despatch of the Society's publications, which include the Special Publications as well as our three journals. In 1987 he took over from the Treasurer the fulfilment of requests for journal back numbers, and later Clive and Alma Jermy passed over the main journal mailing, which he continued to do until the time came for the Society to employ the services of a mailing house. Those not involved will not appreciate the amount of work involved in preparing the journals and numerous inserts for posting. With military precision, all were arranged around a large table and the process painlessly done thanks to (mainly) willing volunteers. And it's not just the regular publications; scarcely a day goes by that does not entail a visit to the Post Office to fulfil a back number or Special Publication request. Delay is minimal and the opportunity is often taken to make a contact, the personal touch helping to bind the Society's membership.

I am very fortunate and grateful to count Pat as my oldest and most loyal friend, but the Society has so many reasons to be grateful for Pat's loyalty, commitment and self-effacing knowledge, ability and skills over very many years. I can't think of anyone more deserving of the honour of the Society's Honorary Membership.

Paul Ripley

OBITUARIES

Albert Robert ('Matt') Busby 1939 – 2021

Matt was born on the 14th December 1939, and lived his early life in Smethwick in the West Midlands. He lived in the Birmingham area until the late 1980s when he changed jobs, moving from Aston University to Warwick University in Coventry. He stayed in Coventry for the rest of his life. In 1965 he married Margaret at St Philip's Church in Smethwick. They had met following his passion for ballroom dancing, but Margaret always supported Matt at fern meetings. Sadly Margaret died in 1995, leaving Matt and two sons, Martin and Matthew. Matthew later presented Matt with a grandson, Mason.

Matt had an attractive, strong West Midlands accent, 'Brummy' to me. On the phone he was immediately recognisable. He was always polite, having some pleasant little ways, for instance whenever I rang him his first words were "How nice!" – without knowing what boring enquiry I was going to throw at him!

In the 1950s, long before his BPS days, he was part of the St John Ambulance Brigade, joining the 'Sub Aqua Club' section that specialised in water rescues and searches, often in muddy canals full of rubbish. A job that could only fall to the dedicated. Matt was one such. Unbeknown to me he also developed a great interest in steam engines, joining a group calling themselves the 'Footplate club'; whether or not he got many footplate rides I do not know.

photo from BPS Archive

Matt Busby looking at wall ferns during 1991 BPS Centenary celebrations in the Lake District

These interests in canals and railways were the catalyst to bring him in touch with ferns. He was amazed to see a few growing on the grimy canal and railway walls. Fascinated, he decided to work out what they were – the rest is history! Ferns even dictated his taste in cars; apparently he had a strong love of Morris Minors and Morris Travellers because they had more room for ferns!

He joined our Society in 1972. A full account of the various positions he filled over the years was fully described by John Edgington in the *Bulletin* of 2016 on page 287. In total I have found 12 different categories of jobs that he took on. The most onerous was surely as the Society's Secretary. I list them below, in no particular order.

Secretary for 20 years. I believe Matt wanted to equal Jimmy Dyce's time in the job!

Committee member, on and off. Each term is usually three years but if acting as an officer he would attend Committee meetings anyway.

Vice-President. He served two terms: 1998 to 2004 and 2008 to 2021. Nineteen years in total, and our longest serving Vice-President!

Bulletin Editor for six years.

Archivist. Matt took over this job from Nigel Hall, and after 20 years passed on the baton to Michael Hayward.

Matt ran the **Society's Midlands Group** from 1975 to 1997 and from 2016 until his death, although towards the end Covid limited meetings. It was the first of what is now a very

successful national network of Regional Groups. His group concentrated on visiting members' gardens and as the members aged, increasingly more time was spent on chat and tea and cakes. At the beginning, Matt quickly collected a hardcore of members, who almost always turned up at every meeting, until age became a problem. Today, sadly, I can only think of four long-time members still alive: Clive and Doreen Brotherton, Alan Ogden and Olive Mason. I lived on the periphery of the West Midlands but very occasionally did go when I could. They were always very informative and enjoyable gatherings set in some wonderful gardens.

He also led several **national meetings**, including organising the **Centenary field meeting** in 1991 in the English Lake District. One hundred members and friends sat down to dinner! It took a lot of organising, but, on the surface at least, Matt coped admirably!

photo from BPS Archive

Matt Busby and Lawrence Kirkham on BPS stand at Southport Flower Show in 2000

He organised the Society's stand at the **Southport Flower Show** for about 30 years, and represented the Society at many other shows and events. He also inaugurated the Midlands Fern Show, which ran for six years. He was always assisted by other worthy members, and I suspect it was at these shows, especially Southport, that some of the older members' enthusiasm for cultivars rubbed off. A visit to the BPS stand was always a chance to have a friendly chat. He held the **National Collection** of *Osmunda* for Plant Heritage, and showed his collection at the Hampton Court Flower Show on at least one occasion. He started to compile a taxonomic register of osmundas but never completed it.

Fern Distribution Recorder. Collated wild fern records sent in by members.

Organised the **Foreign Hardy Fern Special Interest Group.** Included a periodic newsletter, with notes sent in by Group members.

Horticultural Information Advisor. Answered queries from members and the public. Matt did many, many **talks on garden ferns to gardening clubs** throughout the West Midlands and beyond.

Spore Exchange Organiser with Margaret Nimmo-Smith.

He was made an **Honorary Member of the Society** for services to the BPS and pteridology, and in 1998 became one of only nine recipients of the **Stansfield Medal** since its introduction in 1938 shortly after Stansfield's death. It is awarded 'to persons contributing to the advancement of the fern cult, whether by an outstanding exhibit, by raising an exceptionally fine fern, by a scientific or cultural discovery or in any other way.'

Matt's love of ferns never waned. Right up to his death he was still recording ferns in the West Midlands, in fact his last article was published posthumously in the *Pteridologist* in 2021 (Vol. 7, Part 2, pp. 161-162). The title, *Retracing my footsteps*, was poignantly prophetic. I think Matt knew something we did not.

I am sure all members would agree that Matt was exceptional.

Martin Rickard
with early life information from Matthew Busby

John David Grue 1946 – 2021

John had an interest in botany since his teenage years, when he often visited the palm house in Sefton Park, Liverpool. He studied Botany at University College, London, after which he took up an exciting job as an Environmental/Outdoor Pursuits instructor at Loch Eil Centre, Fort William, which is where he first met his wife Anne. He then trained as a teacher in York and subsequently taught at schools in Settle, Manchester, and finally Longdendale, where he was also involved in educational research in Scandinavia and Finland through the European Education Research Association. He retired in 2005. He told us once, whilst out ferning, that when teaching he made a point of remembering the names of every single pupil in his class. Having been a teacher myself I was in awe of this, as sadly I mostly only remembered the naughty ones!

During retirement he travelled around a lot with Anne in their camper van. He learned Spanish so he could achieve a life-long ambition to go botanising in Patagonia and he chaired the Broadbottom Community Association for many years. He joined the BPS in 1996 and attended a number of national and regional field and indoor meetings. He was one of the founder members of the Manchester and North Midlands Group, joining us on many of our excursions into Derbyshire. We held indoor meetings at The Firs Botanical Grounds in Manchester and he hosted some fern forays in Broadbottom, where he had been monitoring the wall ferns that had appeared in the last 25 years or so. He put this down to the reduction in air pollution and acid rain since the decline of industrial Manchester. John was a keen fern grower and had an impressive garden and rockery. He was always a very entertaining and knowledgeable member to have along on our fern forays. He was full of fun! On one occasion he turned up in his open-topped sports car and took me for a spin; the first and only time I've been in a sports car!

photo: Y.C. Golding

John Grue in 2014 in Hay Wood, Derbyshire

In 2014 John took over the Manchester Group when Roland and I moved to Hull. He instigated the beginnings of a fernery on an old ruined industrial site in Broadbottom. Concurrently BPS members were also fern planting at Jodrell Bank Arboretum. In the autumn of 2017 we returned to Jodrell to plant more ferns. We were expecting to be joined by John but we got the shocking news that he had been involved in an accident while out cycling. This resulted in very serious brain damage, which changed his and his family's life for ever. He was hospitalised for quite some time and a few of us went to visit him; he was always cheerful and still full of zest for life. The last time we saw him was at RHS Bridgewater in summer 2021 when Mike Canaway, who had kindly taken over the running of the Manchester Group, organised a BPS meeting. Anne brought John along and he toured around in his wheelchair waving and blowing kisses.

He died on the 14th November, four days after suffering a severe stroke. As well as his wife Anne, he leaves daughter Becky, son Ian and four grandsons. Some BPS members attended his funeral. He is sadly missed.

Yvonne Golding

IN MEMORIAM

We were also sorry to learn of the death of the following (date joined BPS in brackets):

Mr Grant Fortune of Edinburgh (1998)
Ms Jenny Hakney of Yorkshire (2018)
Dr David Larner of Derbyshire (2012)

MEETINGS PROGRAMME 2022

Meetings Secretary: Bryan Smith
Meetings Subcommittee: Bruce Brown, Roger Golding, Nick Hards, Steve Munyard, Julian Reed, Martin Rickard, Paul Ripley, Fred Rumsey

Sat. 30 April	**AGM & Spring Indoor Meeting - Edge Hill University, Ormskirk** Contact: Alison Evans (acl.evans@btinternet.com)
Thurs. 16 - Sun. 19 June	***BBC Gardeners' World Live, Birmingham NEC: BPS Stand** Contacts: Gill & Bryan Smith (Education@eBPS.org.uk)
Sat. 18 - Sun. 19 June	***Plant Societies weekend - RHS Wisley, Surrey: BPS Stand** Contact: Jude Lawton (judelawton@aol.com)
Fri. 8 - Sun. 10 July	**Weekend field meeting - Eskdale, Cumbria** Contact: Bruce Brown (brucenbrown3@gmail.com)
Sat. 23 - Sun. 24 July	***Fern and Carnivorous Plant Show - RHS Wisley, Surrey** Contact: Julian Reed (julianreed@waitrose.com)
Early August	**Field meeting - Scotland, Rarities and Specialities (Part 2)** Contact: Roger Golding (NorthWest@eBPS.org.uk)
Thurs. 18 - Sun. 21 Aug.	***Southport Flower Show: BPS Stand** Contact: Alison Evans (acl.evans@btinternet.com)
Fri. 16 - Mon. 19 Sept.	**Weekend field meeting - South Devon** Contact: Martin Rickard (h.m.rickard@btinternet.com)
Sat. 24 - Sun. 25 Sept.	**Cultivar weekend - The West Midlands** Contact: Julian Reed (julianreed@waitrose.com)
November	**Autumn Indoor Meeting - date and location tba** Contact: Bryan Smith (Meetings@eBPS.org.uk)

** Event supported by, but not organised by, the BPS.*

For further details of these meetings please see the BPS Newsletters and Website. For general enquiries about meetings, contact the Meetings Secretary (Meetings@eBPS.org.uk).
Look out also for news of the winter season of online talks with the Hardy Fern Foundation!

REGIONAL MEETINGS

These meetings are open to all members, so if you are visiting one of the following areas you would be very welcome to join in. For details of meetings please see the BPS website or contact the regional organisers by e-mail, or by post enclosing a stamped addressed envelope.

Cornwall & Devon	Ian Bennallick, Lower Polmorla, St Wenn, Bodmin, Cornwall PL30 5PE Cornwall@eBPS.org.uk
East Anglia	Peter Blake, 14 Mill Hill Road, Norwich NR2 3DP EastAnglia@eBPS.org.uk
Manchester & N. Midlands	Mike Canaway ManchesterNorthMidlands@eBPS.org.uk
Midlands	*Not currently meeting*
North Wales	David Hill, 54 Grosvenor Avenue, Rhyl, Denbighshire LL18 4HB NorthWales@eBPS.org.uk
North-West England	Roger Golding, Fell View, Bowness-on-Solway, Cumbria CA7 5AF NorthWest@eBPS.org.uk
Scotland	Bridget Laue, 50 Liberton Brae, Edinburgh EH16 6AF; Scotland@eBPS.org.uk
South-East England	Julian Reed, 19a Northdown Road, Kemsing, Sevenoaks, Kent TN15 6SD & Peter Clare; SouthEast@eBPS.org.uk
S. Wales & Borders	Brian Dockerill, 19 Westfield Road, Glyncoch, Pontypridd, Mid-Glam., CF37 3AG; SouthWalesBorders@eBPS.org.uk
Wessex	Jo Basil, 14 Royden Lane, Boldre, Lymington, Hants. SO41 8PE & Andrew Leonard; Wessex@eBPS.org.uk
Yorkshire	Barry Wright, 130 Prince Rupert Drive, Tockwith, York, North Yorks. YO26 7PU; Yorkshire@eBPS.org.uk

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The *Bulletin* Volume 9 Number 1 was published on 8 April 2021

Published by THE BRITISH PTERIDOLOGICAL SOCIETY,
c/o Department of Life Sciences, The Natural History Museum,
Cromwell Road, London SW7 5BD

ISSN 0301-9195

Printed by Aysgarth Services, Old Station Road, Loughton, Essex